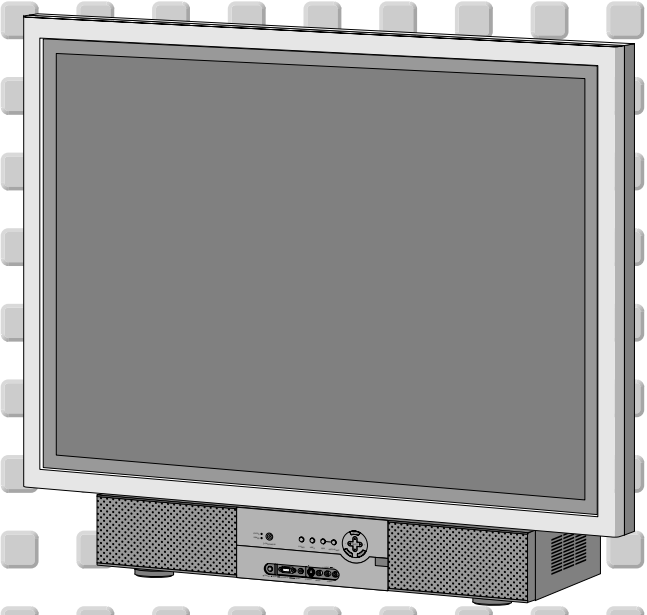
NEC

50” LCD Rear Projection Display

RT50X

User’s Manual



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LIMITED WARRANTY

Except as specified below, the warranty that may be provided by the dealer covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from;
   a. Accident, misuse, abuse, neglect, fire, water, dust, smoke, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Repair or attempted repair by non-authorized persons.
   c. Any shipment of product (claim must be presented to the carrier).
   d. Removal or installation of the product.
   e. Any other causes which do not relate to a product defect.
3. Cartons, carrying cases, batteries, external cabinets, CDROM, or anyaccessories used in connection with the product.
4. Removal or installation charges.
5. Cost of initial technical adjustments (set-up), including adjustment of user controls. These costs are the responsibility of the dealer from whom the product was purchased.
6. Payment of shipping charges.

GARANTIE LIMITEE

Mis à part les point indiqués ci-dessous, la garantie pouvant être couverte par le revendeur comporte l'ensemble des défauts se rapportant au matériel ou aux travaux d'assemblage sur ce produit. Les points suivants ne sont pas couverts par la garantie:

1. Les produits dont les numéro de série a été effacé, modifié ou retiré.
2. Dommages, dégâts ou dysfonctionnement suite à;
   a. Un accident, mauvaise utilisation, abus, négligences, incendies, dégats dûs aux eaux, à la poussière, à la fumée, aux éclairs ou autres phénomènes naturels, à une modification non autorisée du produit, ou à la non-conformité aux instructions fournies avec le produit.
   b. Réparation ou tentative de réparation par des personnes non autorisées.
   c. Toute expédition du produit (les plaintes doivent être adressées à la société de frêt).
   d. Démontage ou installation du produit.
   e. Toute autre cause ne se rapportant pas à un défaut du produit.
3. Les cartons, boîtes, piles, caissons externes, CDROM, ou tout autre accessoire utilisé avec ce poduit.
4. Prix de démontage ou d'installation.
5. Coût des réglages techniques de base (mise au point), incluant les réglages des commandes utilisateurs. Ces coûts sont placés sous la responsabilité du revendeur auprès duquel le produit a été acheté.
6. Paiement des frais de transport.

BESCHRÄNKTE GARANTIE

Außer in den unten beschriebenen Fällen deckt die vom Händler unter Umständen gewährte Garantie alle Material- oder Herstellungsfehler dieses Produktes ab. In den folgenden Fällen wird keine Garantie gewährt:

1. Wenn die Seriennummer des Produktes unleserlich gemacht, geändert oder entfernt worden ist.
2. Bei einer Beschädigung, Beeinträchtigung oder Funktionsstörung, die aus folgenden Fällen resultiert:
   a. Unfall, falscher Gebrauch, Missbrauch, Fahrlässigkeit, Feuer, Wasser, Staub, Rauch, Blitzeinschlag oder andere Naturereignisse, nicht autorisierte Veränderungen des Produktes oder die Missachtung der dem Produkt beigefügten Anleitung.
   b. Reparatur oder der Versuch einer Reparatur durch nicht autorisierte Personen.
   c. Jeglicher Transport des Produktes (die Haftung liegt in diesem Fall bei der den Transport durchführenden Person).
   d. Entfernung oder Installation des Produktes.
   e. Jegliche andere Ursachen, die nicht mit einem Defekt dieses Produktes zusammenhängen.
3. Verwendung von Kartons, Transportkisten, Batterien, Außengehäusen, CD-ROMs oder anderem Zubehör zusammen mit diesem Produkt.
4. Entfernungs- oder Installationsforderungen und –kosten.
5. Kosten der technischen Anfangseinstellungen (Setup), einschließlich der Einstellungen der Benutzersteuerungen. Diese Kosten sind vom Händler zu tragen, von dem das Produkt erworben wurde.
6. Bezahlung von Transportkosten.

GARANZIA LIMITATA

A parte la specificazione seguente, la graanzia che potrebbe essere fornita dal rivenditore copre tutti i difetti di materiali o nella lavorazione in questo prodotto. I seguenti non sono coperti dalla garanzia :

1. Ogni prodotto che ha il numero seriale difettoso, modificato o rimosso.
2. Danni, deterioramento o malfunzionamento risultanti da;
   a. Incidenti, abuso, cattivo uso, negligenza, fuoco, acqua,polvere,fumo,fulmini o altri atti naturali di tipo naturale, modifiche inautorizzate del prodotto, o errori nel seguire le istruzioni fornite con il prodotto.
   b. Riparazioni o tentativi di riparazioni effettuati da persono non autorizzate.
   c. Qualsiasi trasporto del prodotto (i reclami devono essere presentati dal corriere).
   d. Rimozione o installazione del prodotto.
   e. ogni altra causa non relativa ad un deficit del prodotto.
3. Cartoni, scatole di trasporto, batterie, armadietti esterni, CDROM, o qualsiasi altro accessorio annesso al prodotto.
4. Carichi di rimozione o installazione.
5. Costi di aggiustamenti tecnici iniziali (set-up), includendo i comandi di regolazione. Il rivenditore dal quale avete acquistato il prodotto è responsabile di ciò.
6. Pagamento delle spese di consegna.

GARANTÍA LIMITADA

A excepción de lo que se especifica abajo, la garantía que puede ser suministrada por el distribuidor cubre todos los defectos en material o elaboración en este producto. Lo siguiente no es cubierto por la garantía:

1. Cualquier producto en el cual el número serial haya sido desfigurado, modificado o removido.
2. Daños, deterioro o malfuncionamiento resultado de;
   a. Accidente, mal manejo, abuso, negligencia, fuego, agua, polvo, humo, relámpagos u otros fenómenos naturales, modificaciones del producto sin autorización, fallas en el seguimiento de las instrucciones suministradas con el producto.
   b. Reparación o intentos de reparación por personas no autorizadas.
   c. Cualquier envío del producto (el reclamo debe presentarse al transportador).
   d. Remoción o instalación del producto.
   e. Cualquier otra causa que no este relacionada con un defecto del producto.
3. Cartones, estuches de transporte, pilas, gabinetes externos, CDROM, o cualquier accesorio utilizado en conexión con el producto.
4. Costos por instalación o remoción.
5. Costo de los ajustes técnicos iniciales (configuración), incluyendo el ajuste de los controles de usuario. Estos costos son responsabilidad del distribuidor donde se adquirió el producto.
6. Pago de los costos de envío.

BEGRÄNSAD GARANTI

Garantin som ges av återförsäljaren täcker alla brister i material och utförande med undantag av vad som anges nedan. Följande täcks inte av garantin:

1. Produkter vars serienummer har blivit oläsligt, modifierats eller tagits bort.
2. Skador, försämring eller felfunktion som beror på:
   a. Olyckor, fel bruk, missbruk, vanskötsel, brand, vatten, rök, stoft, åska eller annan orsak som beror på naturen, icke auktoriserad modifikation av produkten samt underlåtenhet att följa anvisningarna som lämnas med produkten.
   b. Reparationer eller försök på reparation av icke auktoriserade personer.
   c. Transportskador (dessa bör riktas till transportföretaget).
   d. Avmontering eller installation av produkten.
   e. Övriga orsaker som inte har något samband med produktens fel.
3. Förpackningslådor, bärväskor, batterier, externa höljen, CD-ROM-skivor samt andra tillbehör som används tillsammans med produkten.
4. Avmonterings- och installationskostnader.
5. Kostnader för tekniska justeringar (inställning), inklusive justering av användarreglagen. Dessa kostnader är återförsäljarens ansvar där produkten köpts.
6. Betalning för transportkostnader.

NEC Technologies Projectors

Product Registration Card

InstaCare® INSTANT REPLACEMENT PROGRAM

TravelCare℠

InstaCare Xpress℠

NEC Technologies
Solutions with Vision

PLACE
CORRECT
POSTAGE
HERE

USA and Canada Only

ATTN: CUSTOMER SERVICE & SUPPORT
NEC TECHNOLOGIES, INC.
VISUAL SYSTEMS DIVISION
1250 N. ARLINGTON HEIGHTS RD.
ITASCA, IL 60143-1248

REGISTRATION CARD FOR NEC TECHNOLOGIES PROJECTORS

THANK YOU

Thank you for your purchase of an NEC Technologies projector. By purchasing an NEC projector, you are able to access the best limited warranty and service programs available in the industry today.

InstaCare® service provides for the repair and return of your projector within three business days. For the ultimate in hassle free service, NEC pays for the round-trip shipping.

When time matters most and overnight replacement is not fast enough, **InstaCare Xpress**℠, available for a nominal fee, provides for a "next available flight" replacement option*.

TravelCare℠ allows projector customers to receive service on their projector when traveling internationally, regardless of where the projector was originally purchased.

With a full compliment of warranty and service programs from NEC, you'll never be stranded at work or on the road!

NEC Technologies, the NEC Technologies Spirit icon and InstaCare are registered trademarks, and InstaCare Xpress and TravelCare are service marks of NEC Technologies Inc. NEC is a registered trademark of NEC Corporation. SMARTer Kids is a trademark of the SMARTer Kids Foundation. DLP is a trademark of Texas Instruments Inc. GT, RT and DT Series projectors are covered by InstaCare three-day repair/return service only. InstaCare and InstaCare Xpress service is available only in the U.S. and Canada. *Airline restrictions and flight availability may apply for InstaCare Xpress service.

InstaCare® INSTANT REPLACEMENT PROGRAM

Register your projector!!

In order to qualify for the One Business Day replacement coverage portion of InstaCare:
Visit our website at **www.nectech.com**, click on product registration, then on presentation products and submit your completed form online, or return this completed registration card.

Upon receipt, we'll send a confirmation letter with all the details you'll need to take advantage of fast, reliable warranty and service programs from the company that provides:
Solutions with Vision, NEC Technologies.

NEC Technologies
Solutions with Vision

☐ **Mr.** ☐ **Ms.** ☐ **Mrs.**

First Name **Initial** **Last Name**

Title

Company Name

Street Address **Apt. #**

City **St./Prv.** **Zip+4/Postal Code**

Day Phone - (AREA CODE) **E-Mail**

Date of Purchase (MONTH DAY YEAR)

Please indicate which product was purchased
Model #
Serial #

Which segment most closely identifies the market that you will use the product in

☐ **Corporate** ☐ **Government** ☐ **Education** ☐ **Other** _____
☐ State ☐ Federal ☐ Local ☐ K-12 ☐ Higher Ed Fill in Blank

If your market segment is Education, did you purchase through the SMARTer Kids™ Foundation? ☐ **Yes** ☐ **No**

Please indicate the # of employees at your company
☐ **<100** ☐ **100-999** ☐ **>1000**

Can we contact you about new product offerings in the future? ☐ **Yes** ☐ **No** **via** ☐ **E-Mail** ☐ **Mail**

What types of products do you currently use and what products are you interested in within the next 12 months?

	Currently Use	Interested
LCD Projectors	☐	☐
DLP™ Projectors	☐	☐
High Light Output Projectors	☐	☐
CRT Projectors	☐	☐
Home Theatre	☐	☐

	Currently Use	Interested
Plasma Monitors	☐	☐
CRT Monitors	☐	☐
Handheld Computers	☐	☐
Notebook Computers	☐	☐
Desktop Computers	☐	☐
Single/Multi CPU Servers	☐	☐

☐ Check this box if you do not want to receive special offers from carefully selected vendors.

LIMITED WARRANTY (USA and Canada only)

NEC TECHNOLOGIES' PROJECTOR PRODUCTS

NEC Technologies, Inc. (hereafter NECTECH) warrants this product to be free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

NEC Technologies' RT50X projectors are covered by a one (1) year parts and labor limited warranty from the date of the first customer purchase. The lamp is warranted for 2000 hours of operating time or six months, whichever comes first.

WHO IS PROTECTED

This warranty may be enforced only by the first purchaser, and is not transferable.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as specified below, this warranty covers all defects in material or workmanship in this product. NECTECH'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NECTECH'S OPTION. REPLACEMENT PRODUCTS MAY BE NEW OR 'LIKE NEW'. The following are not covered by the limited warranty and NECTECH shall not be liable for:

1. Any product which is not distributed in the U.S.A. or Canada by NECTECH or which is not purchased, installed, and operated in the U.S.A or Canada.
2. Any product on which the serial number has been defaced, modified or removed.
3. Normal decrease in lamp light output over time.
4. Damage, deterioration or malfunction resulting from:
   a. Accident, misuse, abuse, neglect, improper ventilation, fire, smoke, water, dust, lightning or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
   b. Repair or attempted repair by anyone other than a NECTECH authorized service center.
   c. Any shipment of the product (claims must be presented to the carrier).
   d. Removal or installation of the product.
   e. Any other cause which does not relate to a product defect.
   f. Use of the product beyond normal operating conditions. Normal operating conditions are defined as product use not in excess of 5 hours per day and 260 days per year.
5. Cartons, carrying cases, shipping cases, batteries, external cabinets, magnetic tapes, or any accessories used in connection with the product.
6. Service required as a result of third party components.

WHAT NECTECH WILL PAY FOR

NECTECH will pay labor and material expenses for covered items, but NECTECH will not pay for the following:

1. Removal or installation charges.
2. Costs of technical adjustments, set-up, maintenance, or adjustment of user controls.
3. Payment of shipping and related charges incurred in returning the product for warranty repair.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on your product, consult the dealer from whom you purchased the product.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage. In order to obtain warranty service, you may be required to describe and demonstrate the problem to your dealer or to NECTECH.
3. All products returned to NECTECH for service
   MUST have prior approval. To receive approval or for the name of the nearest NECTECH authorized service center, call NEC Technologies at 800-836-0655.
4. It shall be your obligation and expense to ship the product, freight prepaid, or to deliver it to a NECTECH authorized service center, in either the original package or a similar package affording an equal degree of protection.
5. In the event a product is returned to NECTECH for warranty service, and it is determined that there is no product defect or that the product condition is not covered by this limited warranty, a diagnostic service fee may be charged to the customer.

LIMITATION OF IMPLIED WARRANTIES

EXCEPT AS EXPRESSLY SET FORTH IN THIS LIMITED WARRANTY, NECTECH MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS AND DURATION OF THIS LIMITED WARRANTY.

EXCLUSION OF DAMAGES

NECTECH'S LIABILITY FOR ANY DEFECTIVE PRODUCT IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE PRODUCT AT NECTECH'S OPTION. NECTECH SHALL NOT BE LIABLE FOR:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THIS PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, COMMERCIAL LOSS; OR
2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.

HOW STATE LAW RELATES TO THE WARRANTY

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

FOR MORE INFORMATION, CONTACT:
NEC TECHNOLOGIES, INC.
1250 N. Arlington Heights Road, Suite 500
Itasca, Illinois 60143-1248
TELEPHONE 800-836-0655

Customers are cautioned that product performance is affected by system configuration, software, the application, customer data, and operator control, among other factors. While NECTECH products are considered to be compatible with many systems, the specific functional implementation by the customers of the product may vary. Therefore, the suitability of a product for a specific purpose or application must be determined by the customer and is not warranted by NECTECH.

DECLARATION OF CONFORMITY

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

U.S. Responsible Party:	**NEC Technologies, Inc.**
Address:	**1250 N. Arlington Heights Road** **Itasca, Illinois 60143**
Tel. No.:	**(630) 467-5000**

Type of Product:	LCD Projector
Equipment Classification:	Class B Peripheral
Models:	RT50X

We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.

50” LCD Rear Projection Display

RT50X

User’s Manual

English

Deutsch

Français

Italiano

Español

Svenska

IMPORTANT INFORMATION

Precautions

Please read this manual carefully before using your NEC RT50X rear projection display and keep the manual handy for future reference.
Your serial number is located under the name plate label on the right side of your RT50X. Record it here:

CAUTION

To turn off main power, be sure to remove the plug from power outlet.
The power outlet socket should be installed as near to the equipment as possible, and should be easily accessible.

CAUTION

TO PREVENT SHOCK, DO NOT OPEN THE CABINET.
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED NEC SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may be sufficient to cause electrical shock. Therefore, it is dangerous to make any kind of contact with any part inside of the unit.

This symbol alerts the user that important information concerning the operation and maintenance of this unit has been provided. The information should be read carefully to avoid problems.

WARNING

TO PREVENT FIRE OR SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.
DO NOT USE THIS UNIT'S GROUNDED PLUG WITH AN EXTENSION CORD OR IN AN OUTLET UNLESS ALL THREE PRONGS CAN BE FULLY INSERTED.

DO NOT OPEN THE CABINET. THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. ALL SERVICING MUST BE DONE BY QUALIFIED NEC SERVICE PERSONNEL.

DOC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

3. GSGV Acoustic Noise Information Ordinance:

The sound pressure level is less than 70 dB (A) according to ISO 3744 or ISO 7779.

RF Interference

WARNING
The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by NEC Technologies in this manual. Failure to comply with this government regulation could void your right to operate this equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

In UK, a BS approved power cable with moulded plug has a Black (five Amps) fuse installed for use with this equipment. If a power cable is not supplied with this equipment please contact your supplier.

- IBM is a registered trademark of International Business Machines Corporation.
- Macintosh and PowerBook are registered trademarks of Apple Computer, Inc.
- Other product and company names mentioned in this user's manual may be the trademarks of their respective holders.

Important Safeguards

These safety instructions are to ensure the long life of your rear projection display and to prevent fire and shock. Please read them carefully and heed all warnings.

Installation

- For best results, use your rear projection display in a darkened room.
- Place the rear projection display on a flat, level surface in a dry area away from dust and moisture.
- Do not place your rear projection display in direct sunlight, near heaters or heat radiating appliances.
- Exposure to direct sunlight, smoke or steam can harm internal components.
- Handle your rear projection display carefully. Dropping or jarring can damage internal components.

WARNING:
Be sure to use the supplied chains to prevent against the rear projection display overturning.
The chains, wall or pillar must withstand a force of 30 kg/66 lbs.
Make sure that the chains are kept tight. Slack in the chains may result in the rear projection display overturning and causing injury.

WARNING:
Special techniques are required for the other installation work than standard should only be undertaken by qualified installers.
NEC Technologies, Ltd will not accept any responsibility related to any accidents or incidents due to insufficient or inferior installing techniques. Please consult your dealer for more information.

WARNING:
To prevent the rear projection display from overturning, install it on a level place and fasten it in a way with sufficient strength to support the combined weight (49 kg) of the rear projection display (47 kg) and the stand (2.0 kg) for an extended period of time as well as to withstand earthquakes. Insufficient strength or fastening may result in the rear projection display overturning and causing injury.

- Do not place the rear projection display on an unstable cart, stand, or table.
- Do not climb, stand, or hang on the top.
- When attaching the supplied stand to the rear projection display, be sure to secure the stand with a band.

  Do not place heavy objects with a weight of 15 kg or more on top of the stand.
- Do not place heavy objects on top of the rear projection display.

Power Supply

1. The rear projection display is designed to operate on a power supply of 100-120 or 200-240 V 50/60 Hz AC. Ensure that your power supply fits this requirement before attempting to use your rear projection display.
2. Handle the power cable carefully and avoid excessive bending. A damaged cord can cause electric shock or fire.
3. If the rear projection display is not to be used for an extended period of time, disconnect the plug from the power outlet.

Cleaning

1. Unplug the rear projection display before cleaning.
2. Clean the cabinet periodically with a damp cloth. If heavily soiled, use a mild detergent. Never use strong detergents or solvents such as alcohol or thinner.
3. Be careful not to scratch or mar the screen face.

CAUTION
Do not unplug the power cable from the wall outlet under any one of the following circumstances. Doing so can cause damage to the rear projection display:

* While the Hour Glass icon appears.
* While the message "Please wait a moment." appears. This message will be displayed after the rear projection display is turned off.
* Immediately after the power cable is plugged into the wall outlet (the POWER indicator has not changed to a steady amber glow).
* Immediately after the cooling fan stops working (The cooling fan continues to work for 30 seconds after the rear projection display is turned off with the POWER button).
* While the POWER and the STATUS indicators are alternately flashing.

CAUTION
Do not put the rear projection display on its side when the lamp is turned on.
Doing so may cause damage to the rear projection display.

CAUTION
Avoid displaying stationary images for a prolonged period of time. Doing so can result in these images being temporarily sustained on the surface of the LCD panel.
If this should happen, continue to use your rear projection display. The static background from previous images will disappear.

Lamp Replacement

- To replace the lamp, follow all instructions provided on page E-36.
- Be sure to replace the lamp when the message "The lamp has reached the end of its usable life. Please replace the lamp."appears. If you continue to use the lamp after the lamp has reached the end of its usable life, the lamp bulb may shatter, and pieces of glass may be scattered in the lamp case. Do not touch them as the pieces of glass may cause injury. If this happens, contact your NEC dealer for lamp replacement.
- Allow a minimum of 30 seconds to elapse after turning off the rear projection display. Then disconnect the power cable and allow 60 minutes to cool the rear projection display before replacing the lamp.

Fire and Shock Precautions

1. Ensure that there is sufficient ventilation and that vents are unobstructed to prevent the build-up of heat inside your rear projection display. Allow at least 3 inches (10 cm) of space between your rear projection display and a wall.
2. Prevent foreign objects such as paper clips and bits of paper from falling into your rear projection display. Do not attempt to retrieve any objects that might fall into your rear projection display. Do not insert any metal objects such as a wire or screwdriver into your rear projection display. If something should fall into your rear projection display, disconnect it immediately and have the object removed by a qualified NEC service personnel.
3. Do not place any liquids on top of your rear projection display.

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1. INTRODUCTION

RT50X Rear projection display

This section introduces you to the RT50X Rear projection display and describes its features and controls.

Congratulations on Your Purchase of the RT50X Rear projection display

The RT50X establishes a new era in rear projection displays available today. With a 50" viewable screen (measured diagonally), the RT50X enables you to view images from your PC or Macintosh computer (desktop or notebook),
DVD player, VCR, document camera, or even a laser disc player. The RT50X can be setup on a tabletop, cart or installed into a recessed opening. With both front and rear control panels, easy access is available for a variety of input and output connections.

Features you'll enjoy:

- Self contained rear projection display
- 50" viewable screen size (diagonal)
- Built in speakers for integrated audio solution
- Easy set up and operation
- Multiple front and rear input choices for RGB, Video and S-Video sources
- High performance long life lamp for low total operating costs
- 4:3 Native aspect ratio
- HDTV, DTV compatibility
- Wired or wireless remote control operation
- VORTEX Technology for uncompromising display of video and data. Improves white level, color accuracy, dynamic range, and display of varying levels of black in an image.
- Multiple video mode selections depending on your source. Normal for a typical picture; Natural for true color reproduction
- NEC Technologies' exclusive Advanced AccuBlend intelligent pixel blending technology provides for extremely accurate image compression with up to SXGA (1280×1024) resolution*1 .
- Supports most IBM VGA, SVGA, XGA, SXGA/UXGA (with Advanced AccuBlend)*2 , Macintosh, component signal (YCbCr / YPbPr) or any other RGB signals within a horizontal frequency range of 15 to 100 kHz and a vertical frequency range of 50 to 120 Hz. This includes NTSC, PAL, PAL60, SECAM and NTSC4.43 standard video signals.

  NOTE: *Composite video standards are as follows:*
  NTSC: U.S. TV standard for video in U.S. and Canada.
  PAL: TV standard used in Western Europe.
  PAL60: TV standard used for NTSC playback on PAL TVs.
  SECAM: TV standard used in France and Eastern Europe.
  NTSC4.43: TV standard used in Middle East countries.

- Control the unit with a PC using the PC Control port.
- Remote control supports eight pointer choices to individualize your presentation.

*1 An SVGA image (800×600) is converted to a crisp 1024×768 image with NEC Technologies Advanced AccuBlend.

*2 An SXGA image (1280×1024) and a UXGA (1600×1200) image are converted into a crisp 1024x768 image with NEC Technologies Advanced AccuBlend.

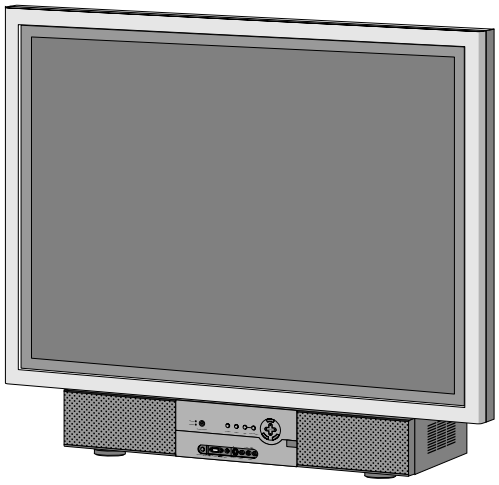
Getting Started

As you begin to familiarize yourself with the RT50X product, take a few minutes now to review the user's manual. This manual contains detailed information on your product for proper set up and use. At the beginning of each section you'll find an overview for that section to aid in your understanding of the RT50X features and capabilities. At the end of the manual is a troubleshooting section to help you quickly and easily resolve problems you may encounter while setting up or using the product.

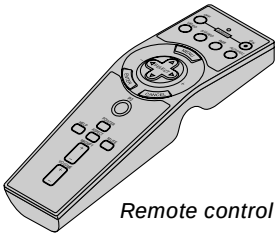
Thank you for your purchase of the NEC RT50X Rear projection display.

What's in the Box?

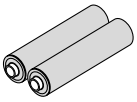
Make sure your box contains everything listed. If any pieces are missing, contact your dealer.
Please save the original box and packing materials if you ever need to ship your RT50X Rear projection display.



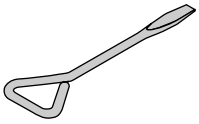
RT50X Rear Projection Display



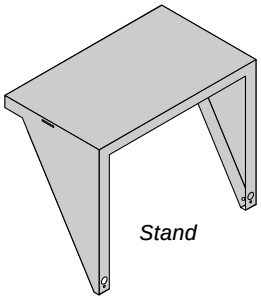
Remote control



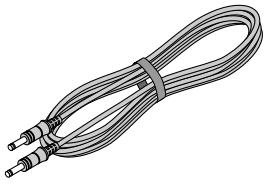
Batterries (AA × 2)



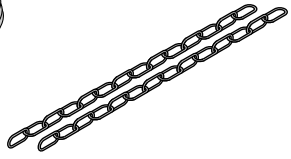
Screwdriver



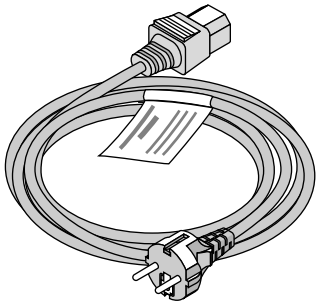
Stand



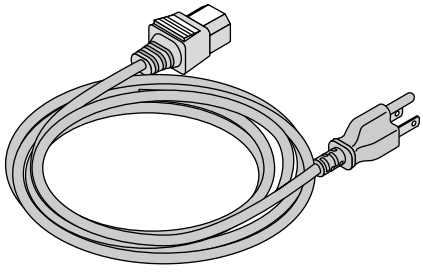
Remote control cable



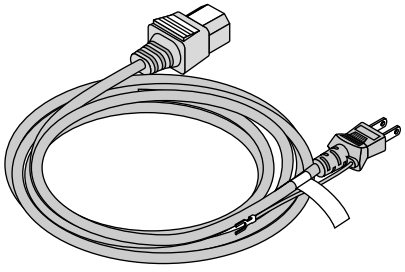
Chains
See page E-19



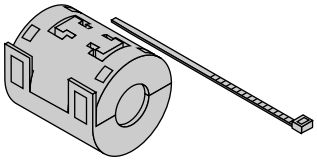
Power cable for Europe (AC 220-240V)



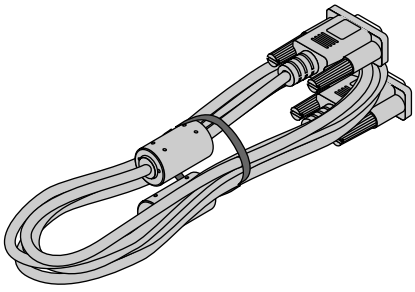
Power cable for North America (AC 120V)



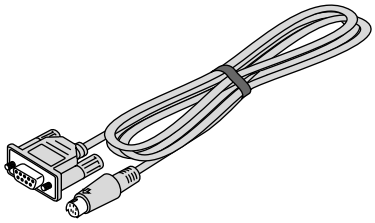
Power cable for Japan (AC 100V)



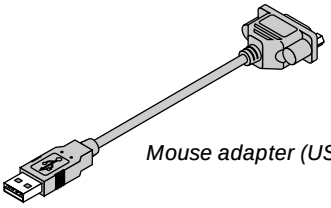
Ferrite clamp core (for a commercially available BNC cable. See page E-20 for attachment instructions)



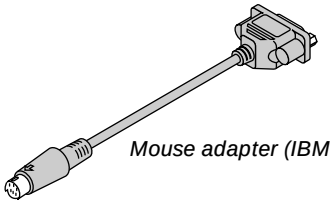
RGB signal cable (15-Pin Mini D-Sub To 15-Pin Mini D-Sub connector)



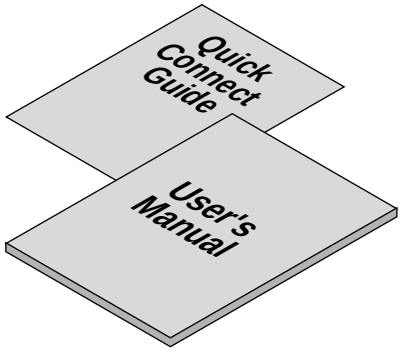
Serial cable



Mouse adapter (USB)

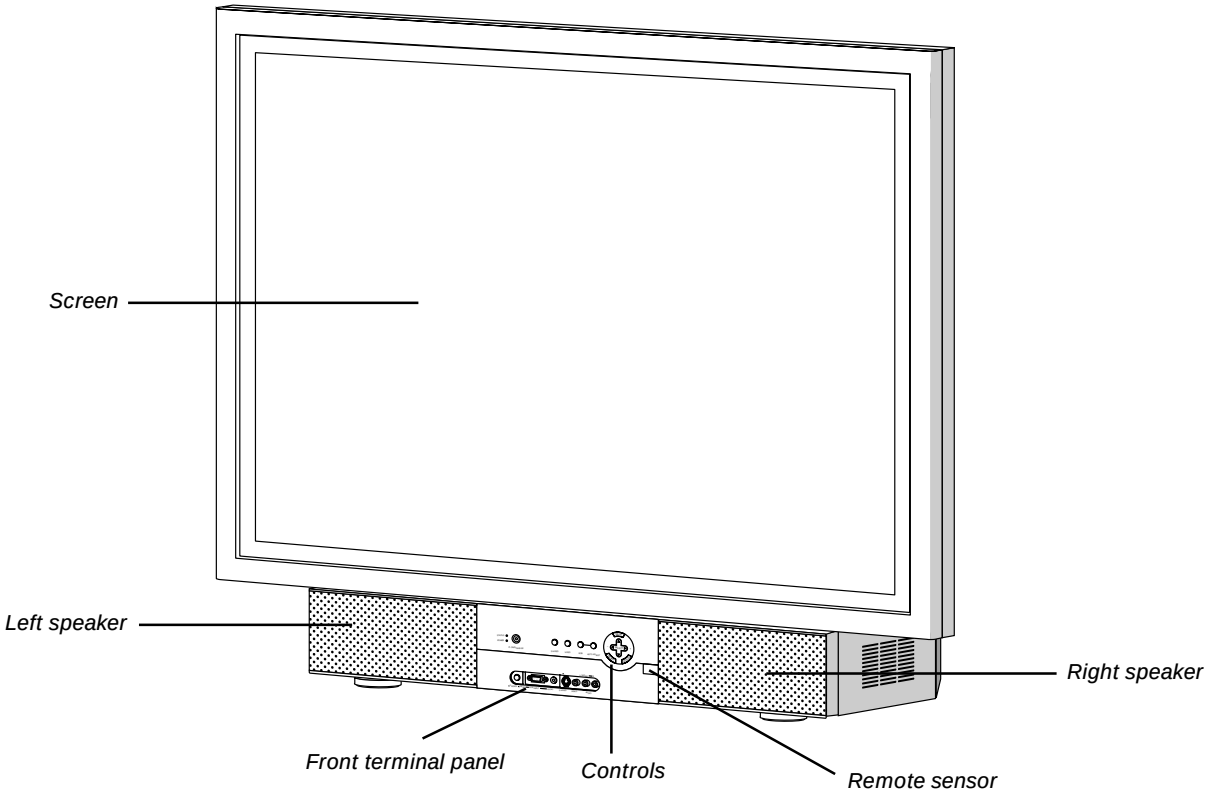


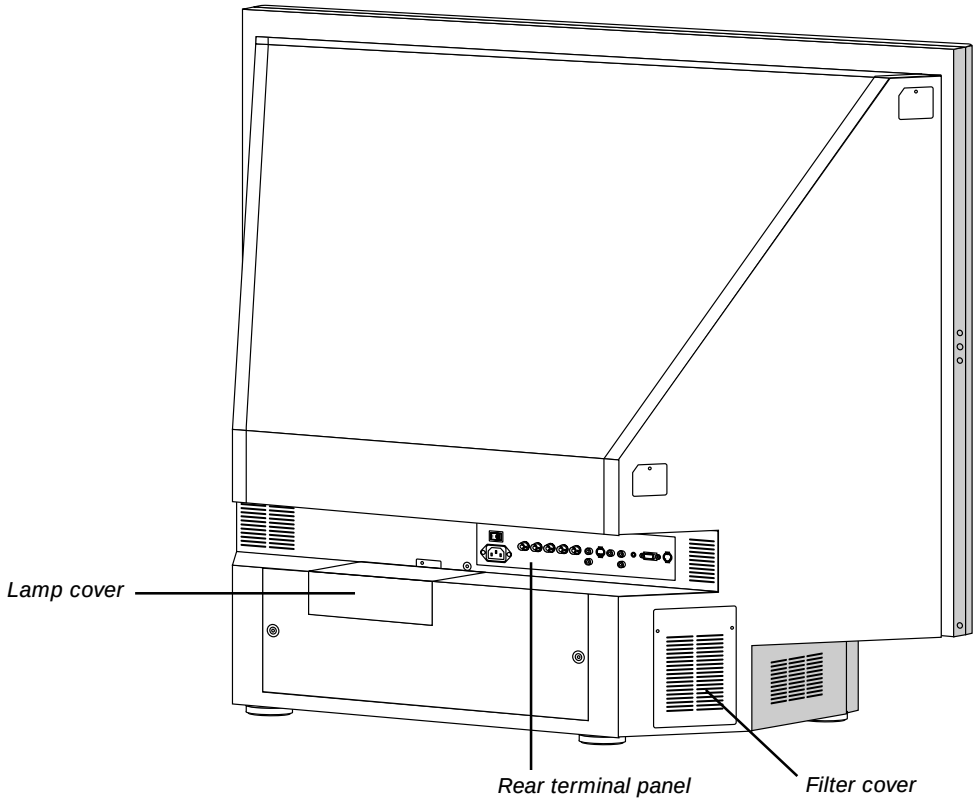
Mouse adapter (IBM PS/2)



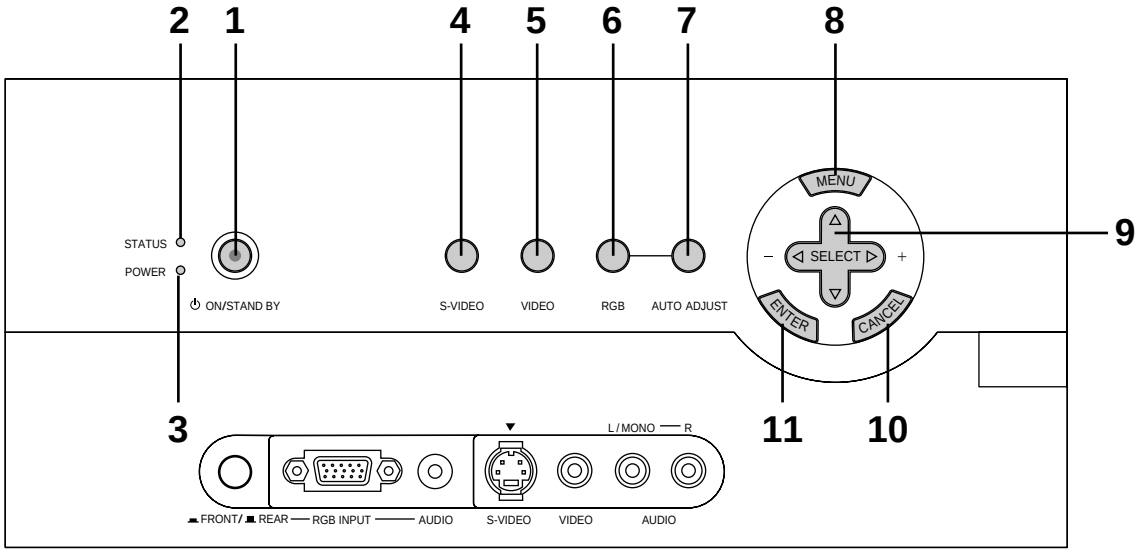
Getting to Know Your RT50X Rear Projection Display

Front/Rear Features





Controls



1. Power Button (ON / STAND BY)
Use this button to turn the power on and off when the power is supplied and the rear projection display is in standby mode.

NOTE: *To turn off the rear projection display, press and hold this button for minimum of two seconds.*

2. Status Indicator
When this is lit red (orange in Eco mode) continually, it's warning you that the projection lamp has exceeded 2000 hours (up to 3000 hours in Eco mode) of service. After this light a ppears, it is advisable to replace the projection lamp as soon as possible. (See page E-36). In addition the message **"The lamp has reached the end of its usable life. Please replace the lamp."** appears continually until the lamp is replaced.
If this light blinks red rapidly, it indicates that the lamp covers or filter covers are not attached properly or the rear projection display is over heated.
See the Power / Status Light Messages on page E-39 for more details.

3. Power Indicator (⏻)
When this indicator is green, the rear projection display is on; when the indicator is orange, it is in standby mode.

4. S-VIDEO Button
Selects an S-Video source.

5. VIDEO Button
Selects an NTSC, PAL, SECAM or NTSC4.43 compatible video source from a VCR, DVD player, laser disc player or document camera.

6. RGB Button
Selects a video source from a computer or component equipment connected to your RGB port.

7. AUTO ADJUST Button
Use this button to adjust Position-H/V and Pixel Clock/Phase for an optimal picture. Some signals may not be displayed correctly or take time to switch between sources.

8. MENU Button
Displays the menu.

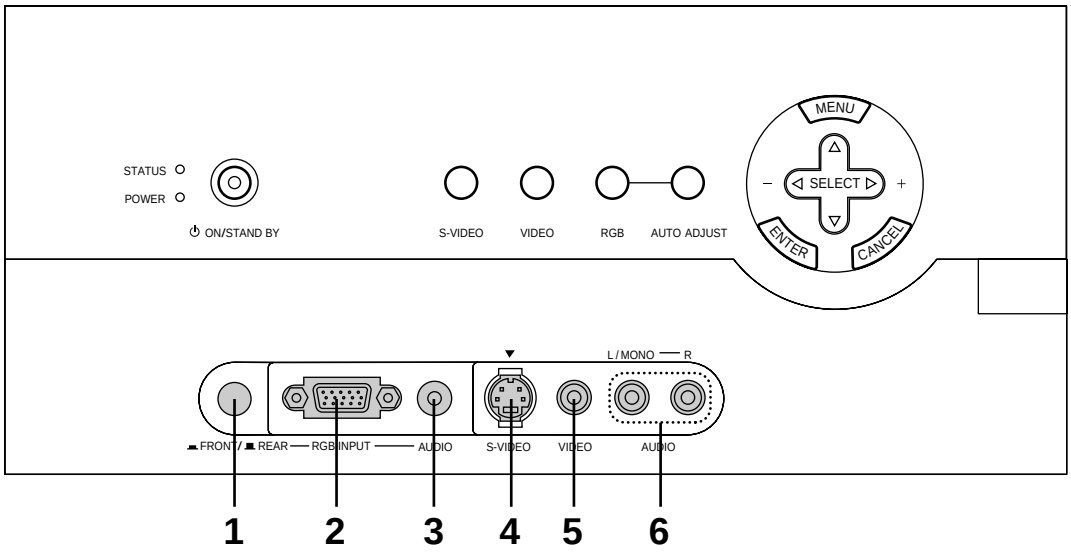
9. SELECT ▲▼◄► / Volume Buttons
▲▼ : Use these buttons to select the menu of the item you wish to adjust.
◄►: Use these buttons to change the level of a selected menu item. A press of the ► button executes the selection. When no menus appear, these buttons work as a volume control.

When the pointer is displayed, these ▲▼◄► buttons move the pointer.

10. CANCEL Button
Press this button to exit the menu. Press this button to return the adjustments to the last condition while you are in the adjustment or setting menu.

11. ENTER Button
Executes your menu selection and activates items selected from the menu.

Front terminal panel



1 FRONT/REAR Terminal Select Button
Use this button to enable the RGB INPUT terminal on either the front or the rear panel. This button affects the RGB INPUT connector and AUDIO jack only.

2 RGB Input Connector (Mini D- Sub 15 pin)
Connect an analog RGB output of your PC or component output of your DVD player.

3 RGB AUDIO Input Mini Jack
Connect an audio output of the RGB equipment connected to the above RGB INPUT connector.

NOTE: *When inputting stereo signal(R/L), connect the L/MONO mini jack of the RGB equipment or use a commercially available RCA conversion cable.*

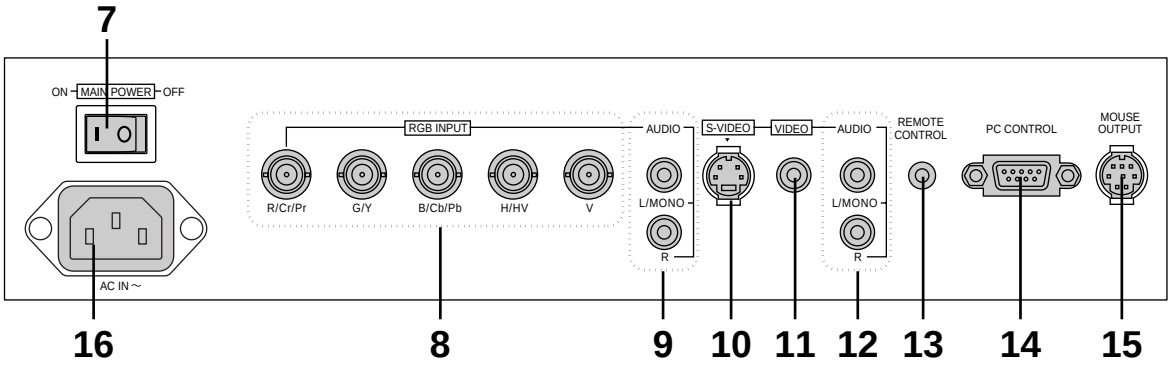
4 S-VIDEO Input Connector (Mini DIN 4 pin)*
Connect an S-Video output of a video equipment such as VCR.

5 VIDEO Input Connector (RCA)*
Connect a video output of a video equipment such as VCR.

6 AUDIO Input Jacks (RCA)
Connect an audio output of the video equipment connected to S-VIDEO or VIDEO INPUT .
For monaural audio, connect it to L/MONO.

***** NOTE:*** *The front terminals take preference over the rear terminals when both terminals are connected to a VCR.*
Unplugging cables from both the VIDEO and the S-VIDEO connectors on the front panel enables the VIDEO and S-VIDEO connectors on the rear.
The S-VIDEO or VIDEO connector on the front panel takes effect by inserting the cable either the S-VIDEO or the VIDEO connector.

Rear terminal panel



7 MAIN POWER ON/OFF Switch
Turns the main power on or off to the rear projection display.
Press the "|" side of the switch to turn on the main power and "O" to turn off the main power.

8 RGB INPUT (R/Cr/Pr, G/Y, B/Cb/Pb, H/HV, V) Connectors (BNC)
Connect R,G,B,H (Horizontal sync) and V (Vertical sync) outputs of the external equipment. If using the equipment with a composite sync (SYNC) output, connect it to the H/V terminal. Also connect component video outputs (Y/Cb/Cr) of the equipment such as a DVD player.

9 AUDIO Input Jacks (RCA)
Connect an audio output of the equipment connected to 8 [RGB INPUT] connector. For monaural audio, connect it to L/MONO.

10 S-VIDEO Input Connector (Mini DIN 4 pin)
Connect an S-Video output of a video equipment such as VCR.

11 VIDEO Input Connector (RCA)
Connect a video output of a video equipment such as VCR.

12 AUDIO Input Jacks (RCA)
Connect an audio output of the video equipment connected to S-VIDEO or VIDEO INPUT .
For monaural audio, connect it to L/MONO.

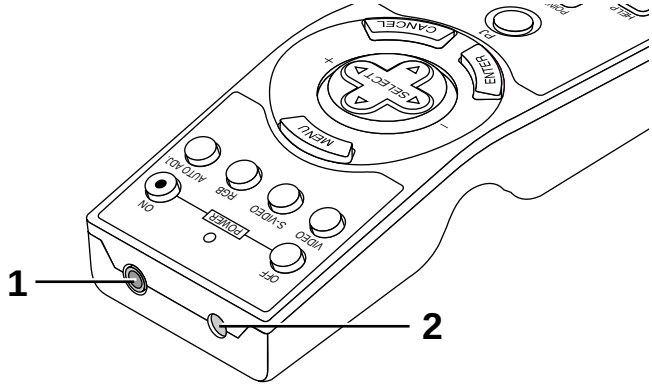
13 REMOTE CONTROL Input Mini Jack
Connect your remote control cable here for wired operation.
Be sure to pull out the remote control cable from here for wireless operation.
Inserting the remote control cable here disables the wireless remote control operation.

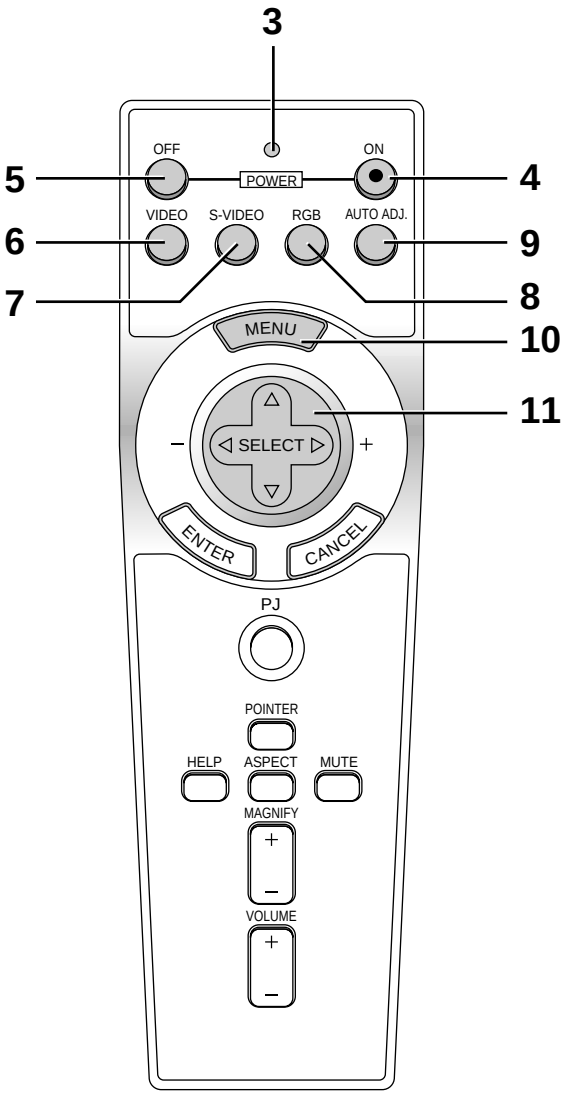
14 PC CONTROL Port (Mini D- Sub 9 pin)
Use this port to connect your PC to control your rear projection display. This enables you to use your PC and serial communication protocol to control the rear projection display. If you are writing your own program, typical PC control codes are on page E-44.

15 MOUSE OUTPUT Port (Mini DIN 8 pin)
Use this port to operate your computer's mouse functions from the remote control.

16 AC Input
Connect the supplied power cable's three –pin glug here.
Plug the other end into an active wall outlet.

Remote Control Features





NOTE: *If you are using a Macintosh computer, you can click either the right-click or left-click button to activate the mouse.*

1. Remote Jack
Connect your remote control cable here for wired operation.

2. Infrared Transmitter
Direct the remote control toward the remote sensor on the cabinet.

3. LED
Flashes when any button is pressed.

4. POWER ON Button
When the main power is applied, you can use this button to turn your rear projection display on.

5. POWER OFF Button
When the main power is applied, you can use this button to turn your rear projection display off.

NOTE: *To turn off the rear projection display, press and hold the POWER OFF button for a minimum of two seconds.*

6. VIDEO Button
Press this button to select an NTSC, PAL, SECAM or NTSC4.43 compatible video source from a VCR, DVD player, laser disc player or document camera.

7. S-VIDEO Button
Press this button to select an S-Video source.

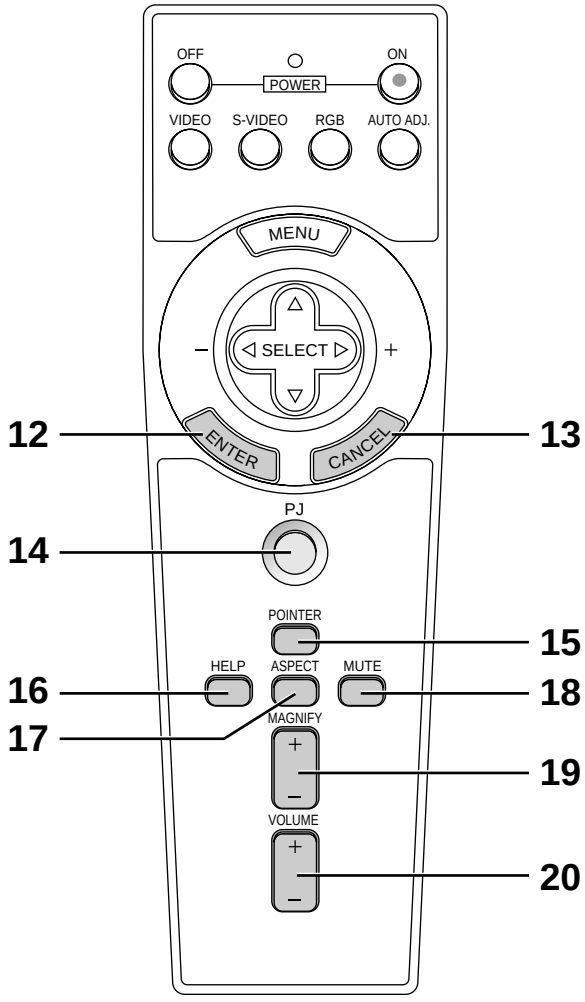
8. RGB Button
Press this button to select a video source from a computer or component equipment connected to your RGB INPUT.

9. AUTO ADJ. Button
Press this button to automatically adjust the vertical/horizontal position, clock frequency and phase if the projected picture is not centered,if there are vertical stripes on the picture or if the picture is flickering. See pages E-26 and E-33.

10. MENU Button
Displays the menu for various settings and adjustments.

11. SELECT ▲▼◄► (Mouse) Button
When you are in the Computer mode, these buttons work as a computer mouse.
When you are in the rear projection display mode, (indicated by the lighted PJ button):

▲▼: Use these buttons to select the menu of the item you wish to adjust.
◄►: Use these buttons to change the level of a selected menu item. A press of the ► button executes the selection.
When the pointer is displayed, these buttons move the pointer.



12. ENTER (Left Click) Button
When you are in the Computer mode, this button works as the mouse left button.
When this button is pressed and held for a minimum of 1. 5 seconds, the drag mode is set.
When you are in the rear projection display mode, (indicated by the lighted PJ button):
Use this button to enter your menu selection. It works the same way as the "Enter" button on the cabinet.

13. CANCEL (Right Click) Button
When you are in the Computer mode, this button works as the mouse right button.
When you are in the rear projection display mode, (indicated by the lighted PJ button):
Press this button to exit "Menus". It works the same way as the Cancel button on the cabinet.

14. PJ Button
Press this button to switch the Select, Cancel, and Enter buttons between the rear projection display mode (lit red)and the Computer mode. Press this button or any one of the Power ON/OFF, Menu, Help, Pointer or Magnify buttons to switch to the Rear projection display mode and the PJ button lights red. To switch back to the Computer mode, press the PJ button again.

15. POINTER Button
Press this button to display one of the eight pointers;press again to hide the pointer. You can move your pointer icon to the area you want on the screen using the Select button.

16. HELP Button
Provides information about operation and adjustment procedures or the set information for the current menu or adjustment during menu operation.

17. ASPECT Button
Press this button to display the Aspect Ratio select window.
Each time this button is pressed, the current aspect ratio will change as follows:
Normal → Zoom → Wide Zoom → Cinema → Normal → . . .
You can also select the aspect ratio by using the Select or button. If no adjustments are performed within 3 seconds, the Aspect Ratio select window will disappear. (See also page E-32.)

18. MUTE Button
This button turns off the sound for a short period of time. Press again to restore the sound.

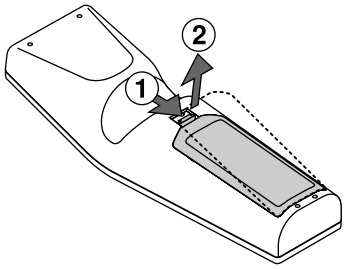
19. MAGNIFY +/- Button
Use this button to adjust the image size up to 400%. See also page E-27.)
When the Pointer is displayed, the magnified image is displayed at the center of the Pointer. When the Pointer is not displayed, the magnified image is displayed at the center of the screen.
When the image is magnified, the pointer is changed to the magnifying icon.

20. VOLUME +/- Button
Press (+) to increase the volume and (–) to decrease it.

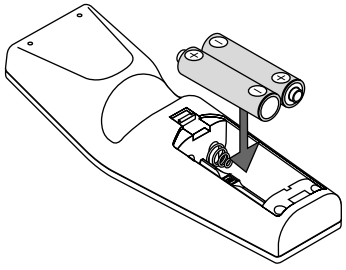
NOTE: *The default is the Computer mode, which allows you to use the SELECT, CANCEL, and ENTER buttons as your computer mouse. When the POWER ON/OFF, MENU, POINTER, HELP, ASPECT or MAGNIFY button is pressed, the PJ button lights red to indicate that you are in the Rear projection display mode. If no buttons are pressed within 10 seconds, the light goes out and the Rear projection display mode is canceled.*

Remote Control Battery Installation

1. Press firmly and slide the battery cover off.

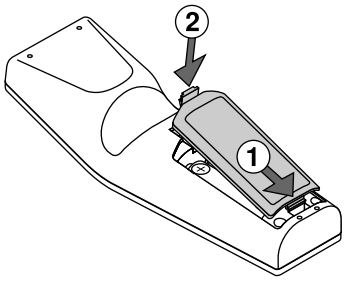


2. Remove both old batteries and install new ones (AA). Ensure that you have the batteries' polarity (+/–) aligned correctly.



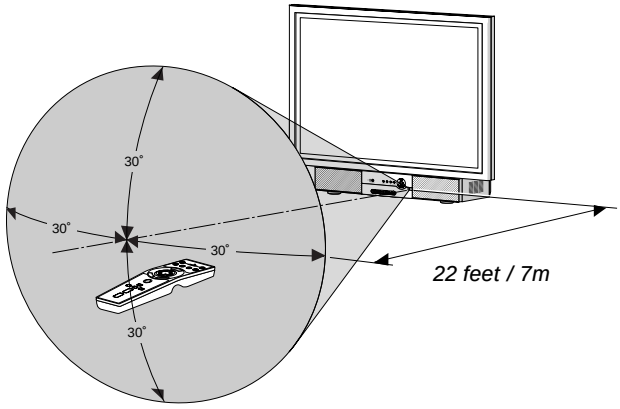
Do not mix different types of batteries or new and old batteries.

3. Slip the cover back over the batteries until it snaps into place.



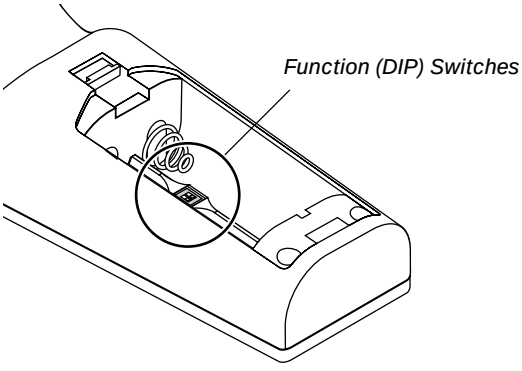
Note on Remote Control Operation:
Pressing and holding the SELECT ▲▼◄► (Mouse) button while installing new batteries may cause malfunction or no operation.
Should this happen, remove the batteries and then install them again without touching the SELECT ▲▼◄► (Mouse) button.

Operating Range



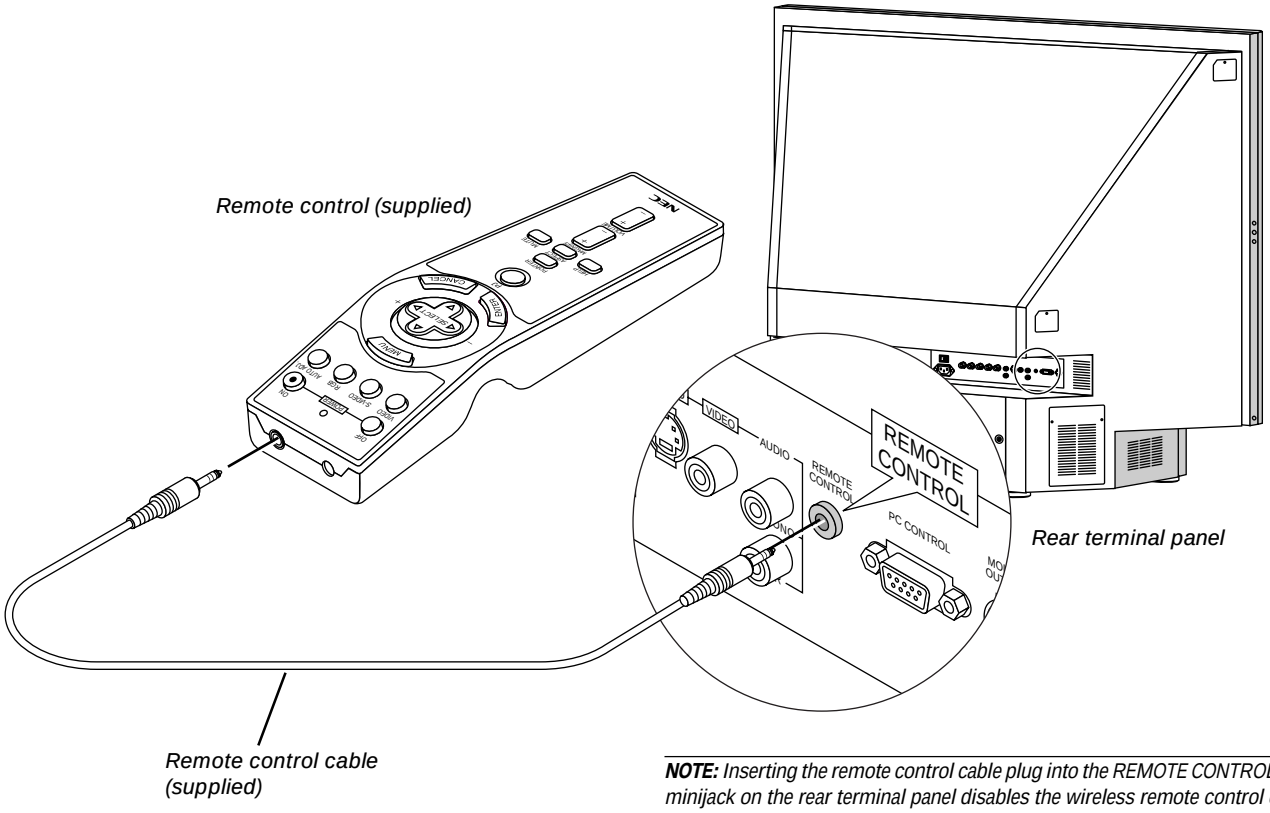
Remote Control Precautions
- Handle the remote control carefully.
- If the remote control gets wet, wipe it dry immediately.
- Avoid excessive heat and humidity.
- If you will not be using the remote control for a long time, remove the batteries.

Do not change the settings of the function (DIP) switches.
There are two switches on the bottom of the battery case.
For normal operation, these function switches are not used.
Be sure to leave the No.1 switch at its original factory setting (ON).
Do not change the setting of the No. 1 switch. Failure to do so will cause incorrect movement in SELECT ◄, ►, ▲, ▼ (mouse) buttons.



Using the Remote Control in Wired Operation

Connect one end of the supplied remote control cable to the REMOTE CONTROL input mini jack and to the remote jack on the remote control.



NOTE: *Inserting the remote control cable plug into the REMOTE CONTROL input minijack on the rear terminal panel disables the wireless remote control operation.*

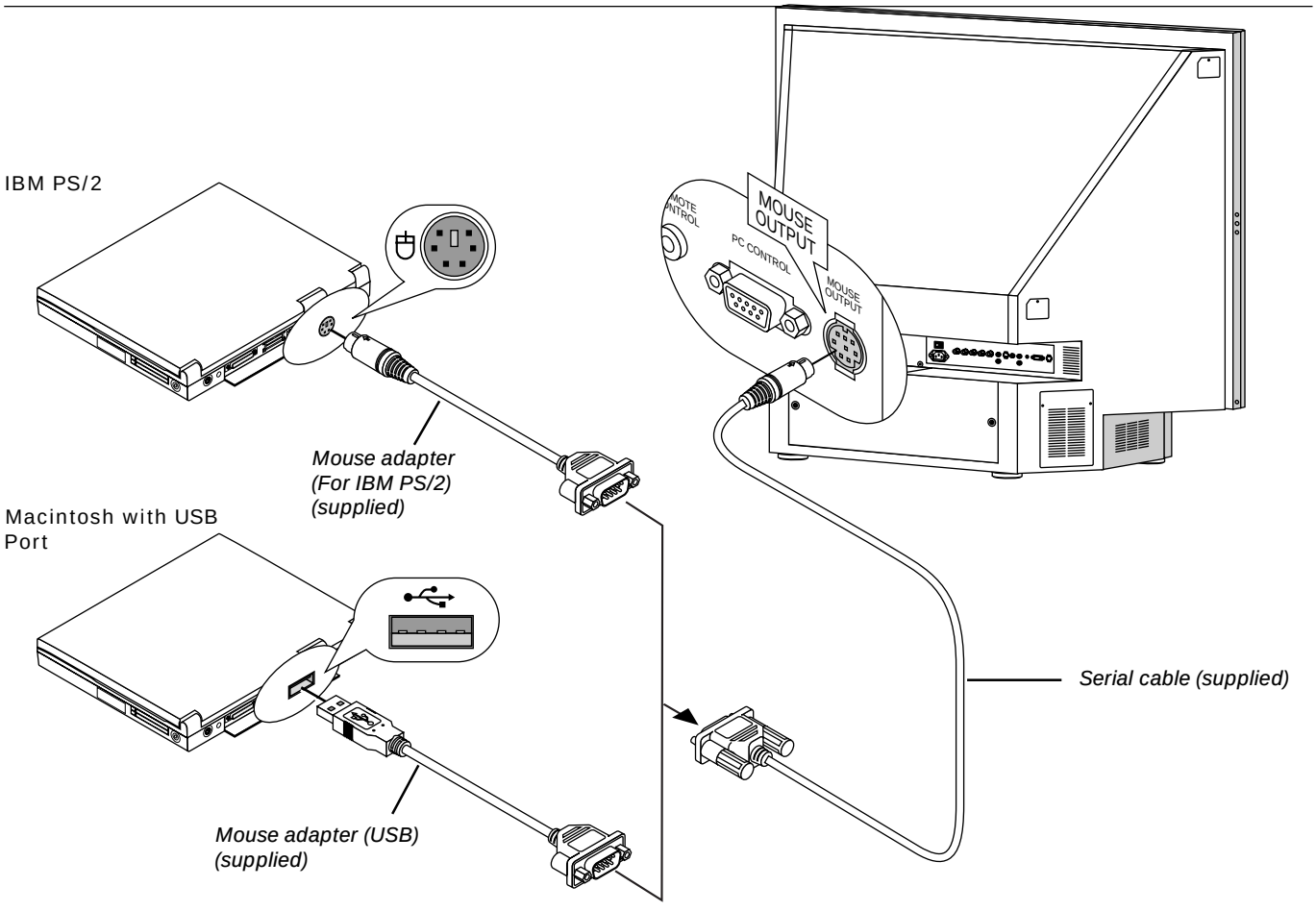
Operating Your Computer Mouse with the Remote Control

The built-in remote mouse receiver enables you to operate your computer's mouse functions from the remote control. It is a great convenience for clicking through your computer-generated presentations.
To use the remote mouse function, connect the mouse output port of the rear projection display to your computer.

To connect the mouse output port:

1. Turn off your computer.
2. For PCs:Remove your current mouse and connect the supplied serial cable from the mouse output to your PC's mouse port.(Use the 6- pin adapter for connecting to a PS/2 computer or the supplied USB adapter.)
   For Macintosh:Attach the supplied mouse adapter for USB to the mouse output port's serial cable and connect the rear projection display to your USB port of a Macintosh computer.

NOTE: *When the built-in remote mouse receiver is available, it will disable your regular mouse. To use your regular mouse again, disconnect the serial cable and restart.*



NOTE: *Depending on the type of connection or OS installed on your computer, you may have to restart your computer or change your computer settings.*

When connecting using the USB terminal:

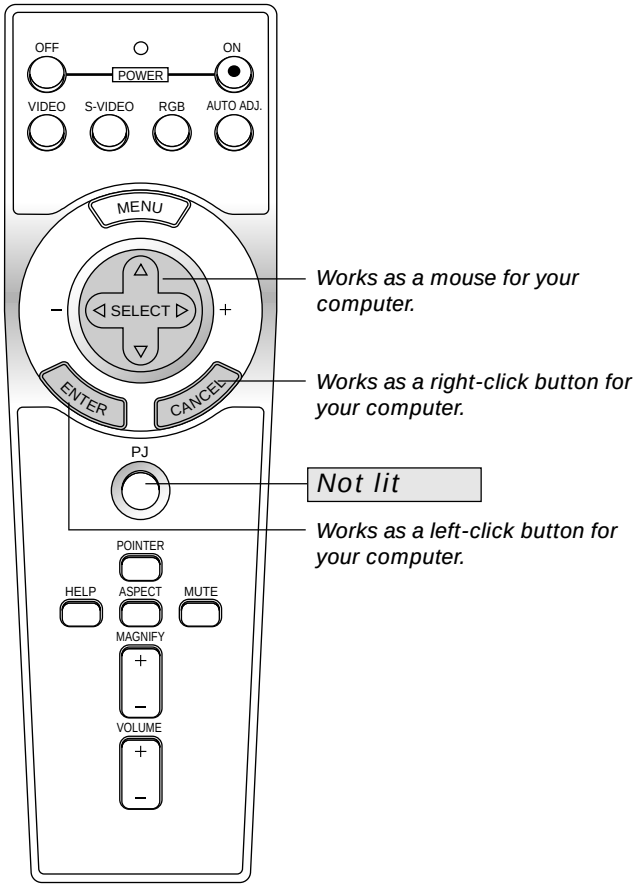
For PC, the built-in mouse receiver can only be used with a Windows 98, Windows ME or Windows 2000 operating system.

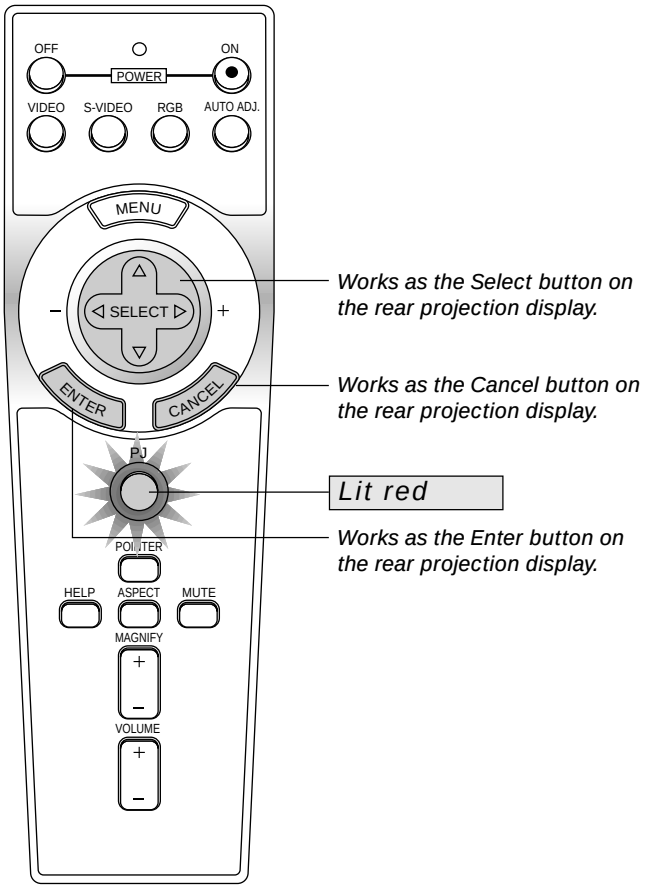
NOTE: *Wait at least 5 seconds after disconnecting the mouse adapter before reconnecting it and vice versa. The computer may not identify the built-in mouse receiver if it is repeatedly connected and disconnected in rapid intervals.*

Switching operation mode between computer and rear projection display

The three shaded buttons shown on the drawing work as a computer mouse in the Computer mode.
In the Computer mode the PJ button is not lit.

- When the POWER ON/OFF, MENU, POINTER, HELP, ASPECT or MAGNIFY button is pressed, the PJ button lights red to indicate that you are in the rear projection display mode, which allows the rear projection display menu operation using the three buttons.
- If no buttons are pressed within 10 seconds, the PJ button's light goes out to indicate that you are in the Computer mode. To enable the rear projection display menu operation again, press the PJ button to light red.
- When the PJ button is lit, if you want to use the mouse function immediately, press the PJ button to return to the Computer mode (not lit).



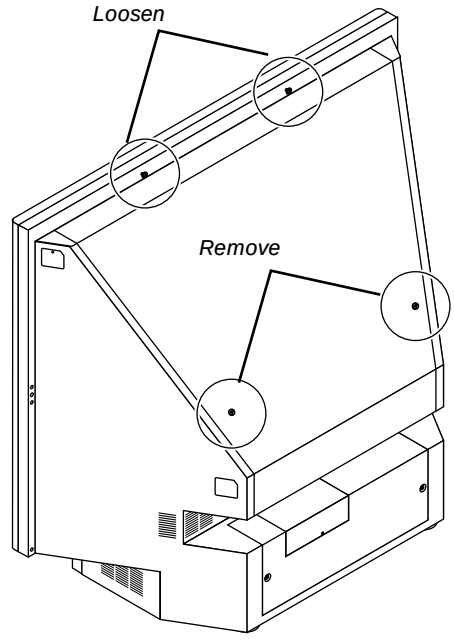


During Computer mode:
During Computer mode by pressing the ENTER button for 1.5 seconds or more then releasing, the drag mode is set and the drag operation can be performed simply by pressing the SELECT (▲, ▼, ◄, ►) (mouse) button. To cancel the drag mode, press the ENTER (left click) button again or press the CANCEL (right click) button.

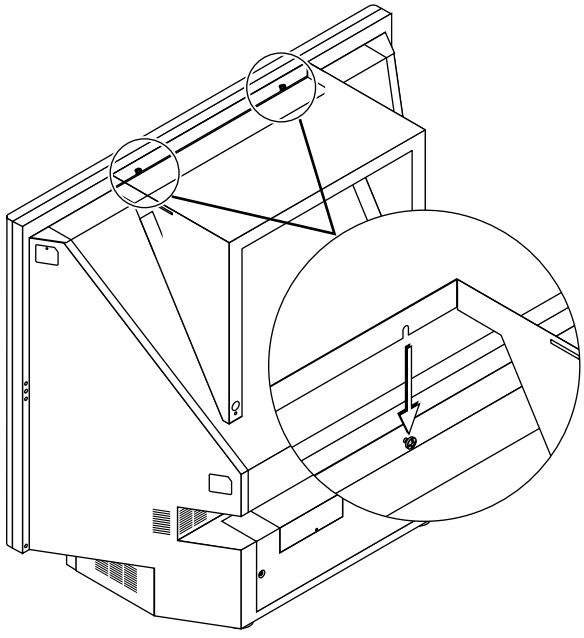
2. INSTALLATION

Attaching the Stand to the top of the rear projection display

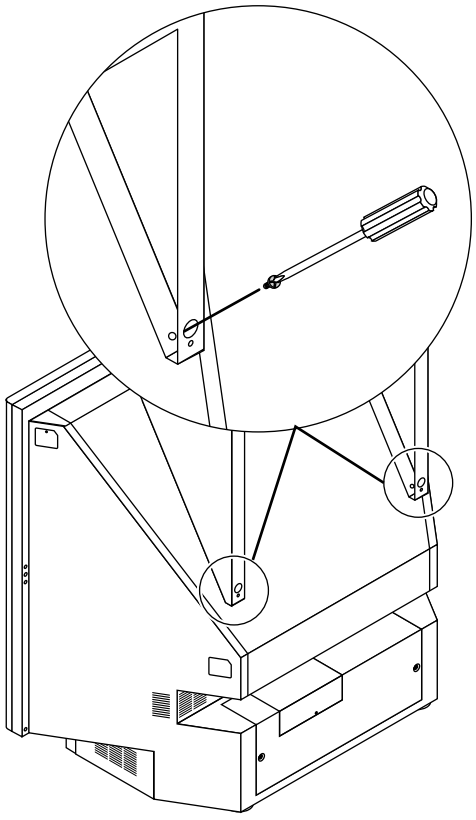
1. Loosen the two screws on the top and remove the two screws on the bottom.



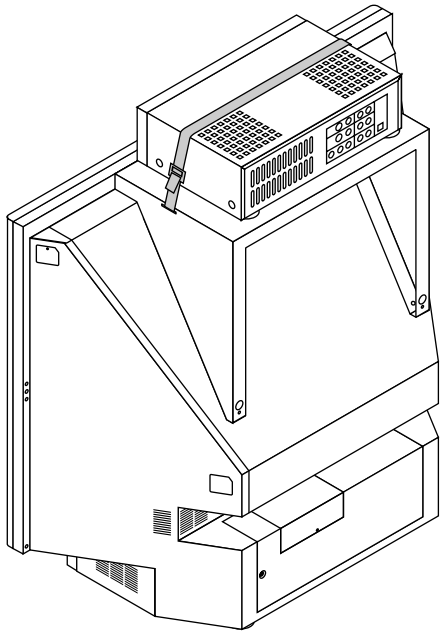
2. Hook the supplied stand on the screws and tighten tentatively.



3. Align the holes of the stand with the holes of the cabinet and tighten the screws that were removed in step 1. Last tighten the two screws on the top.



CAUTION
Be sure to fasten a video equipment such as a VCR to the stand. Failure to do so may cause the video equipment to fall and result in injury.



WARNING

Attaching the supplied chains to prevent against overturning

To prevent the rear projection display from overturning, be sure to install it on a level surface and fix it to a wall or pillar using the supplied chains.

To attach the supplied chains to the wall or pillar:

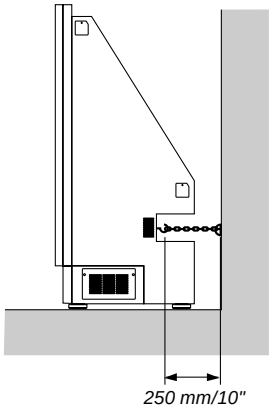
Be sure to use the two chains.

1. Fix one end of the chain to the wall or pillar.

NOTE: *The chains, wall or pillar must withstand a force of 30 kg/66 lbs.*

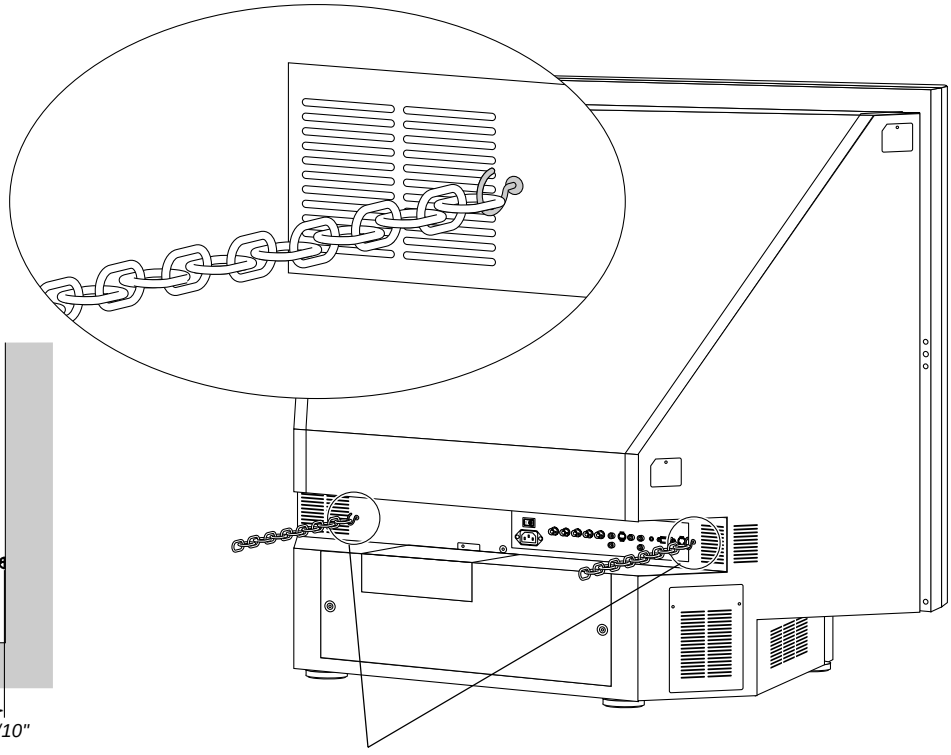
2. Put the other end of the chain on a round screw hook of the rear panel. Do this for both round screw hooks.

NOTE: *Make sure that the chains are kept taut. Slack in the chains may cause the rear projection display to overturn resulting in injury.*



The distance between the hook head and the wall should be 250 mm/10 in. or less.

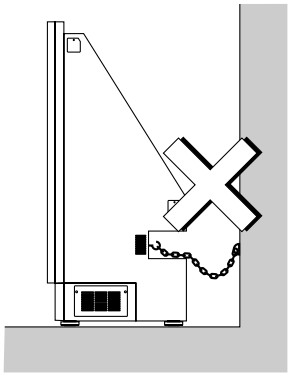
NOTE: *Use commercially available M4 type round screw hooks on a wall or pillar.The hooks must withstand a force of 30 kg/66 lb.*



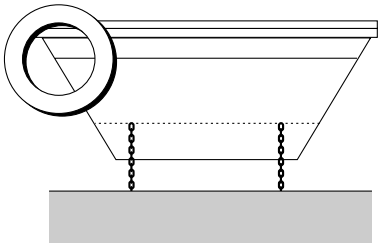
Use these two round screw hooks on the rear panel.

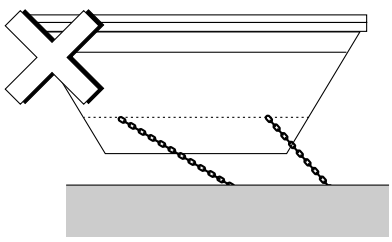
Do's and Don'ts

Take up slack in the chains



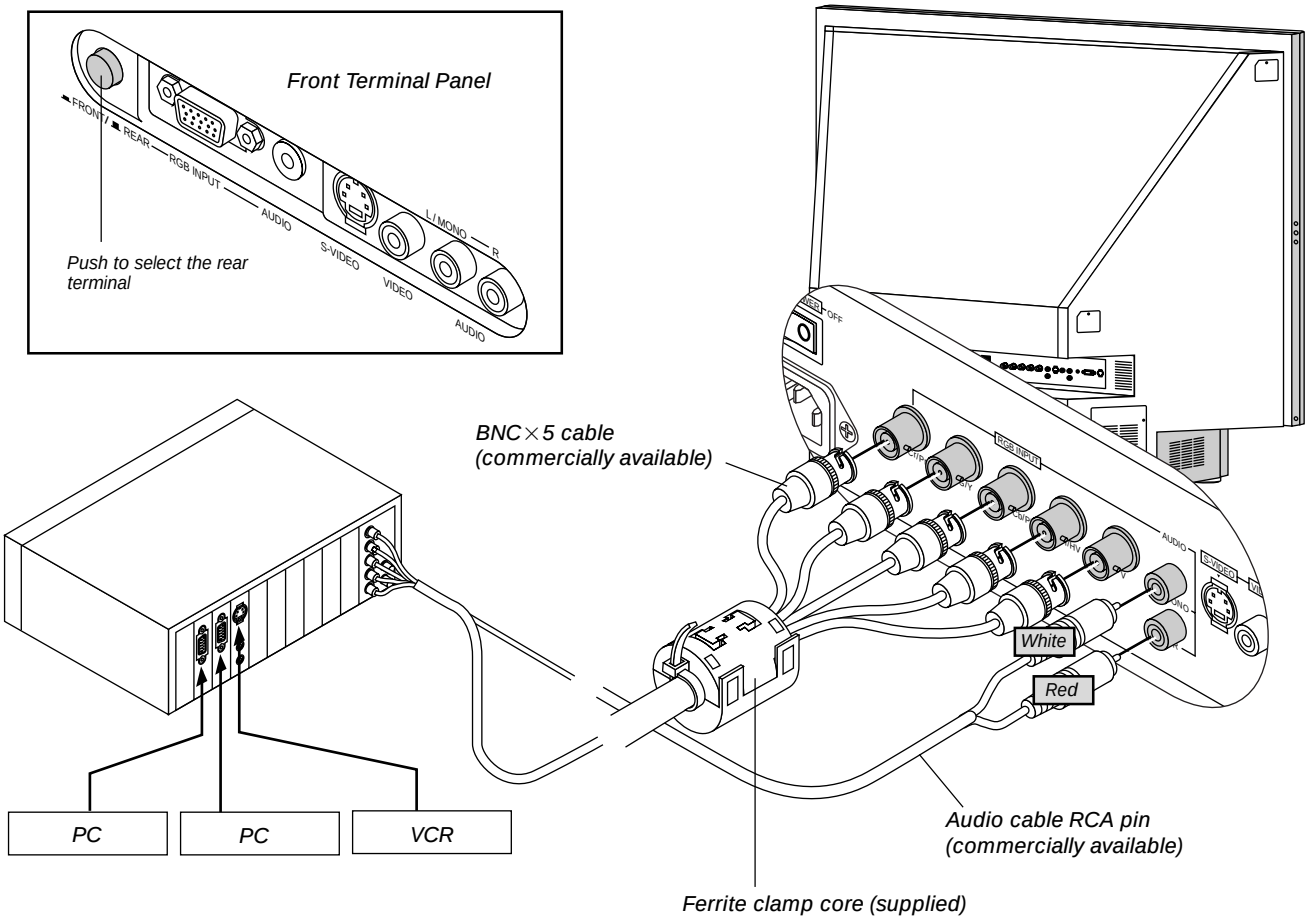
Keep chains straight





Using the RGB INPUT (BNC) on the Rear Terminal Panel

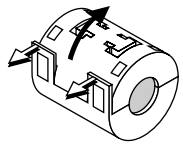
Use a commercially available BNC×5 cable to connect your switcher, PC, DVD player or workstation.



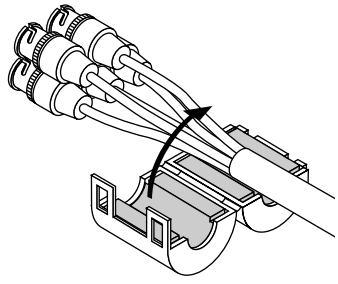
Information for Reducing Radiation of Electromagnetic Waves

To reduce unnecessary radiation of electromagnetic waves, use the supplied ferrite clamp core.

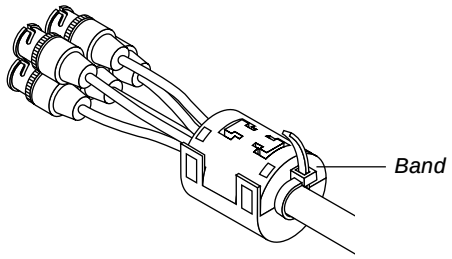
1. Open and attach the ferrite clamp core to a signal cable as close as possible to the end that goes to the rear projection display.
   * Push the catch to open the ferrite clamp core.



2. Close the ferrite clamp core tightly.

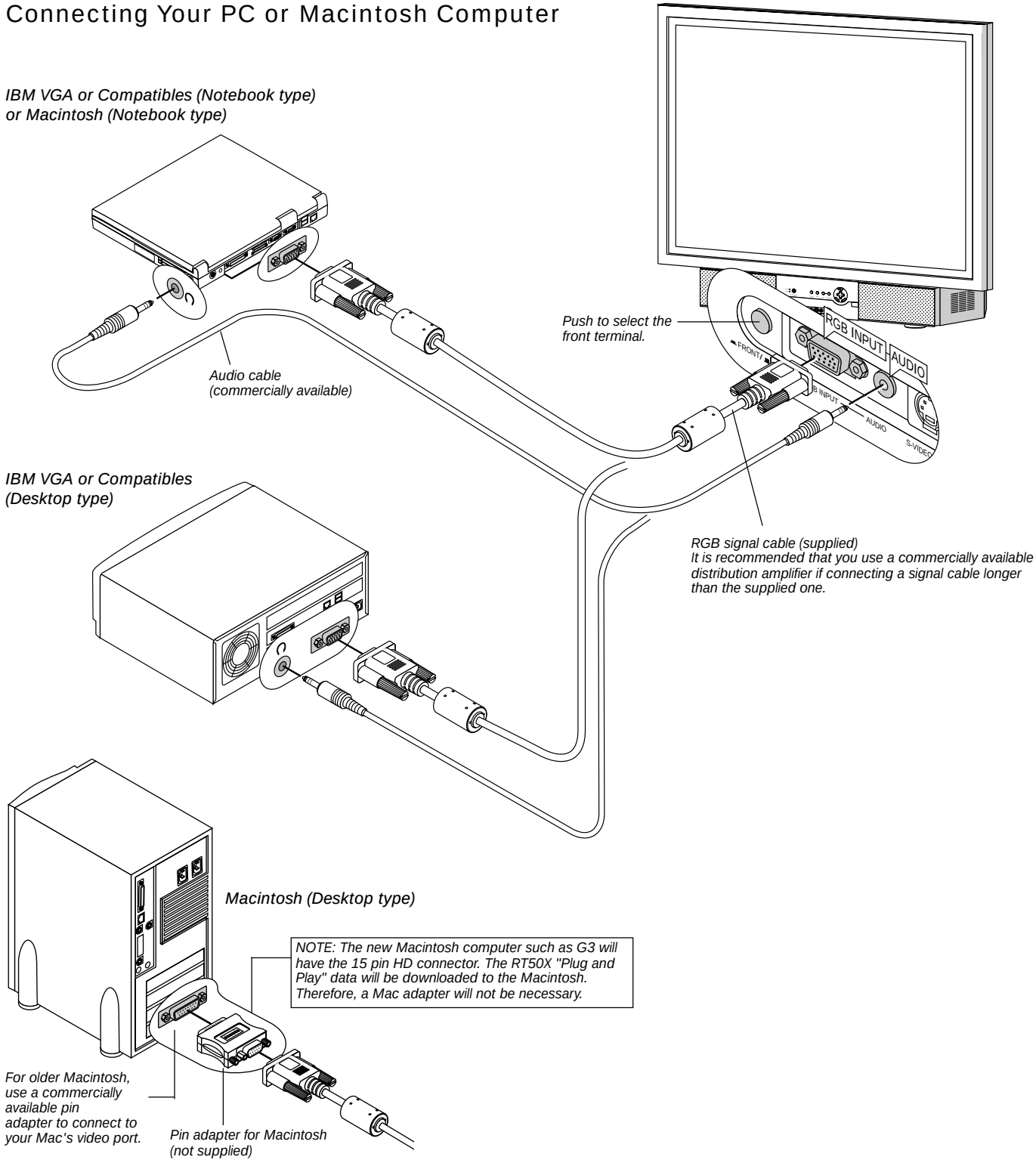


3. Fix the supplied band to the cable as a stopper.
   * Pull the end of the band to tighten it. Cut off the surplus of the band.



NOTE: *Be sure to use the ferrite clamp core at the end of the signal cable. Use care in cutting the band to avoid possible injury to fingers or fly-off.*

Connecting Your PC or Macintosh Computer

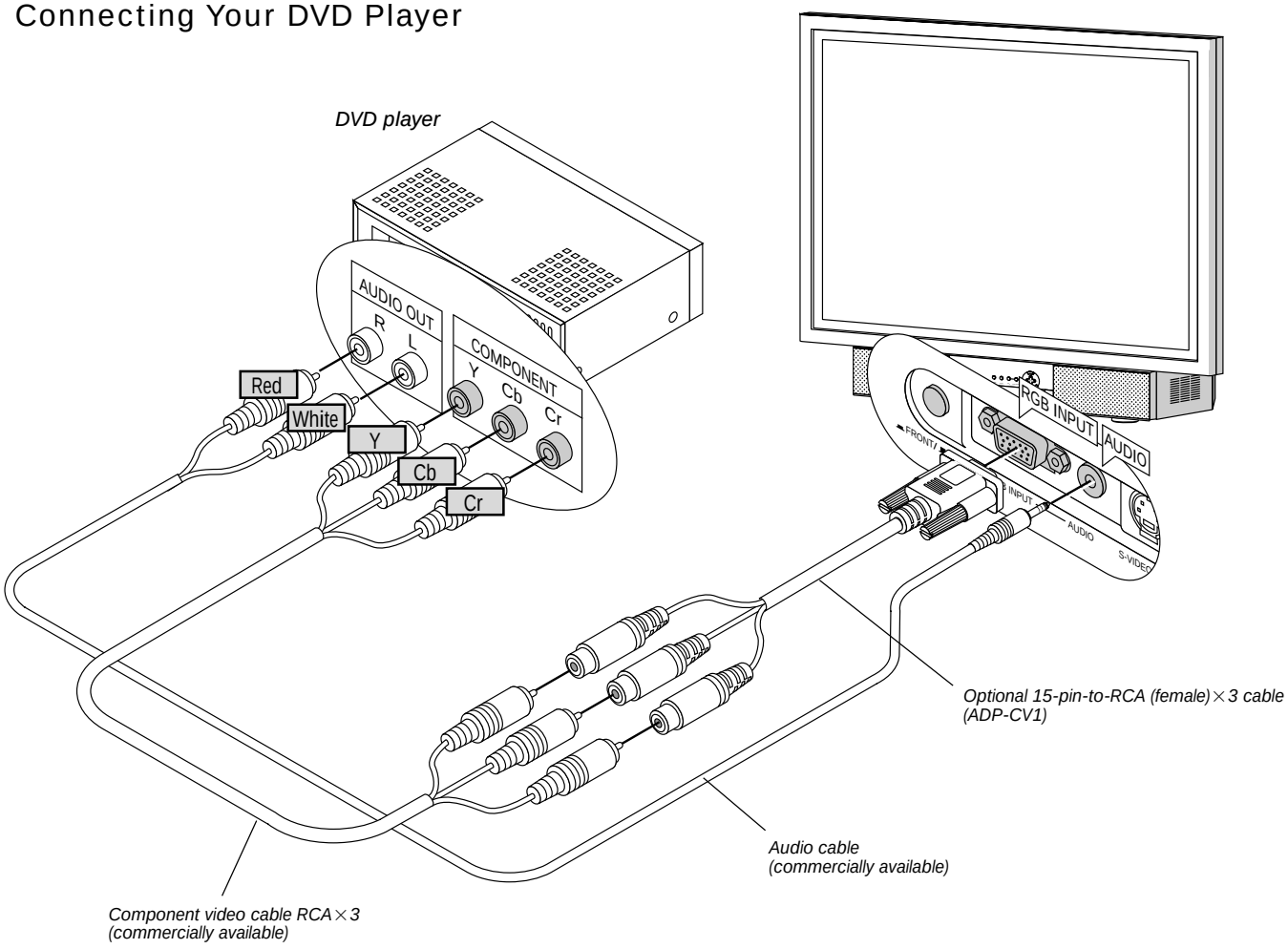

IBM VGA or Compatibles (Notebook type)
or Macintosh (Notebook type)
Audio cable
(commercially available)
Push to select the
front terminal.
RGB INPUT
AUDIO
FRONT/
B INPUT
AUDIO
S-VIDEO
IBM VGA or Compatibles
(Desktop type)
RGB signal cable (supplied)
It is recommended that you use a commercially available distribution amplifier if connecting a signal cable longer than the supplied one.
Macintosh (Desktop type)
NOTE: The new Macintosh computer such as G3 will have the 15 pin HD connector. The RT50X "Plug and Play" data will be downloaded to the Macintosh. Therefore, a Mac adapter will not be necessary.
For older Macintosh, use a commercially available pin adapter to connect to your Mac's video port.
Pin adapter for Macintosh
(not supplied)

Connecting your PC to your RT50X rear projection display will enable you to view your computer's screen image for an impressive presentation.

To connect to a PC or Macintosh computer, simply:

1. Turn off the power to your rear projection display and computer.
2. Use the supplied signal cable to connect your PC or Macintosh computer to the rear projection display.
3. Turn on the rear projection display and the computer.
4. If the rear projection display goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer you've connected to the rear projection display.

Connecting Your DVD Player



You can connect your rear projection display to a DVD player with component outputs or Video output. To do so, simply:

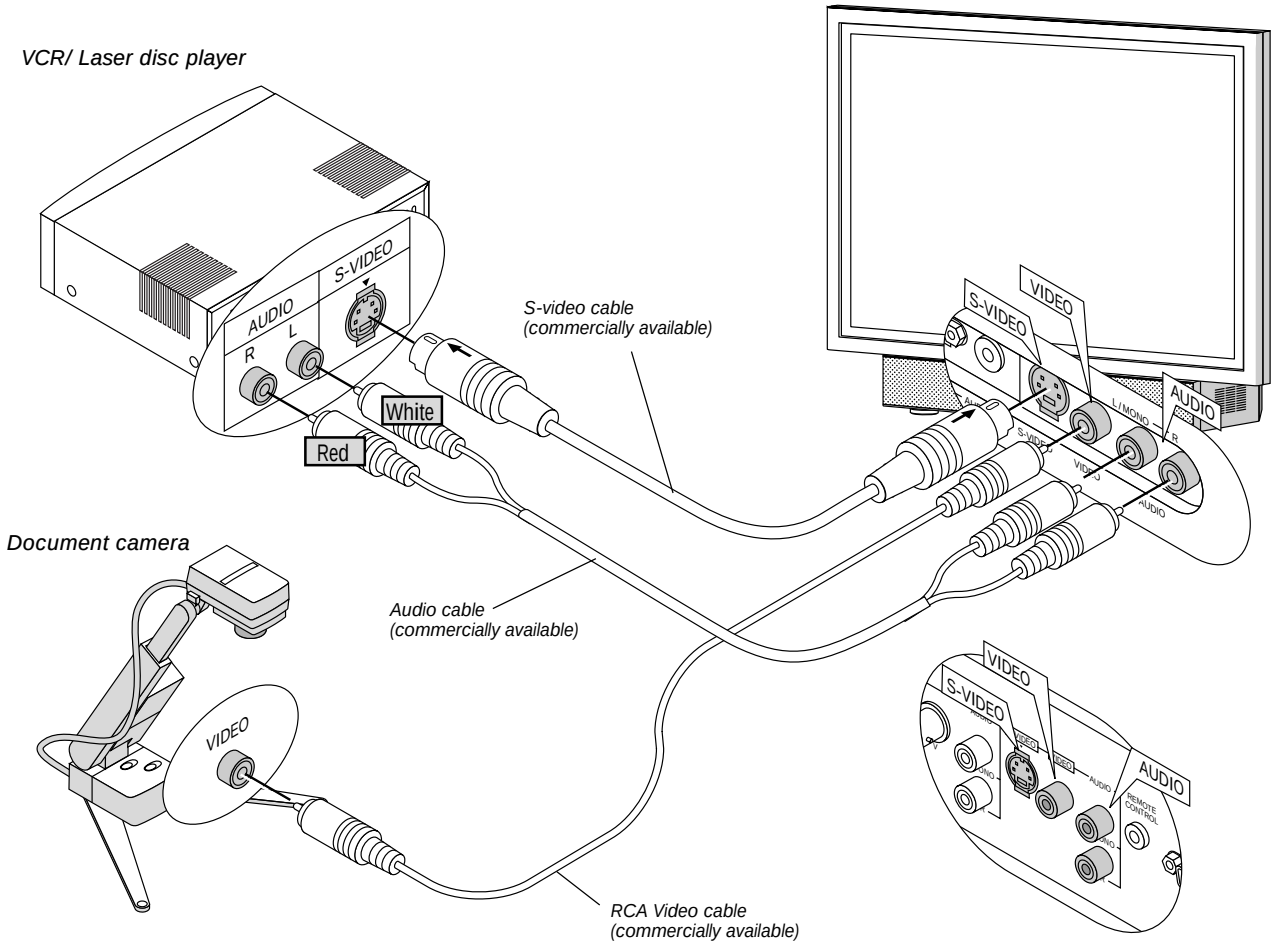
1. Turn off the power to your rear projection display and DVD player.

2. If your DVD player has the component video (Y,Cb,Cr) output, use the optional 15-pin-to-RCA×3 cable to connect your DVD player to the RGB INPUT connector on the rear projection display.
   For a DVD player without component video (Y,Cb,Cr) outputs, use common RCA cables (not provided) to connect a composite VIDEO output of the DVD player to the Video Input of the rear projection display.

3. Turn on the rear projection display and DVD player.

NOTE: *Refer to your DVD player's owner's manual for more information about your DVD player's video output requirements,*

Connecting Your VCR or Laser Disc Player



Use common RCA cables (not provided) to connect your VCR, laser disc player or document camera to your rear projection display. To make these connections, simply:

1. Turn off the power to the rear projection display and VCR, laser disc player or document camera.

2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your rear projection display. Use an audio cable (not supplied) to connect the audio from your VCR or laser disc player to your audio equipment (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.

3. Turn on the rear projection display and the VCR or laser disc player.

NOTE: *Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.*

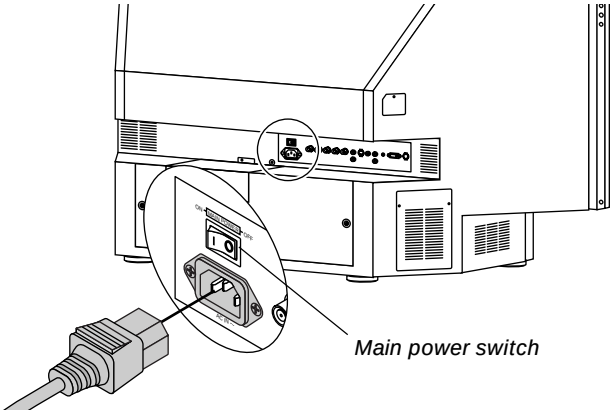
3. OPERATION

This section describes how to select a computer or video source, how to adjust the picture, and how to customize the settings.

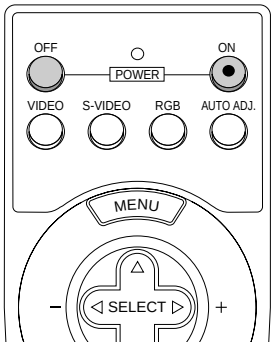
Connecting the Power Cable and Turning on the Rear projection display

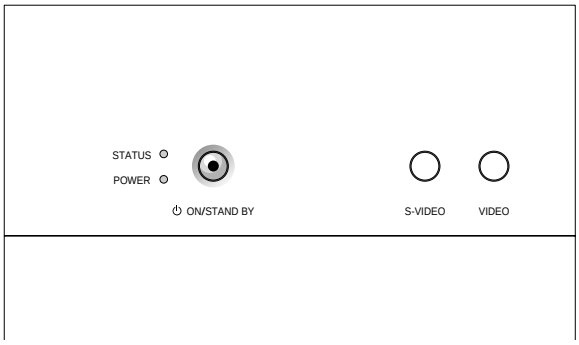
Before you turn on your rear projection display, ensure that the computer or video source is turned on.

1. ***Connect the supplied power cable to the rear projection display.***
   Plug the supplied power cable in the wall outlet and then press the main power switch [**I**] on the rear terminal panel. The rear projection display will go into its standby mode and the power indicator will glow orange.



2. ***Turn on and off the Rear projection display.***

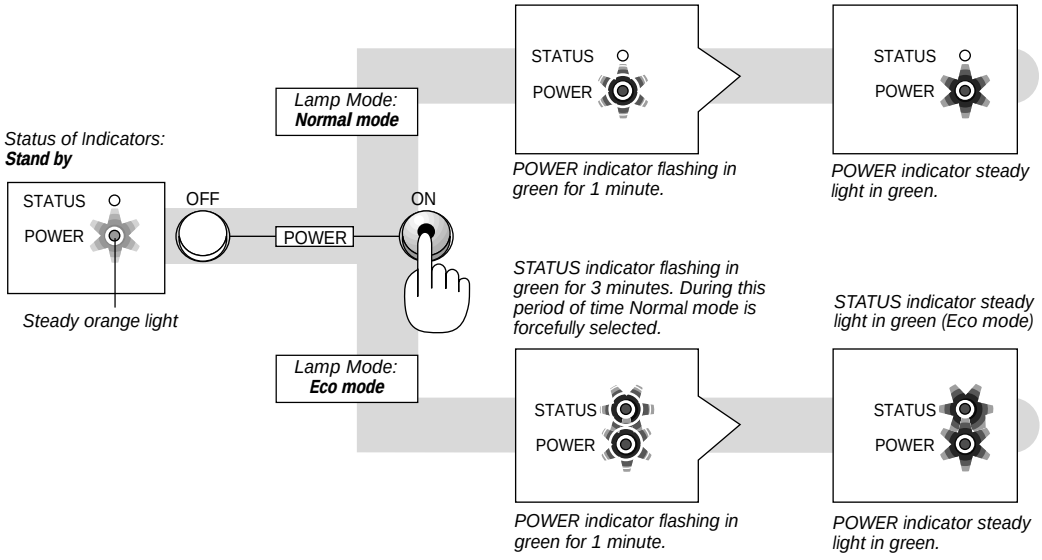




To turn on the rear projection display:
Only after you press the "ON/STAND BY" button on the cabinet or "POWER ON" button on the remote control will the power indicator turn to green and the rear projection display become ready to use.

NOTE: *To turn the rear projection display on by pressing the main power switch [**I**], use the menu and enable the "Auto Start" feature. (See page E-35.)*

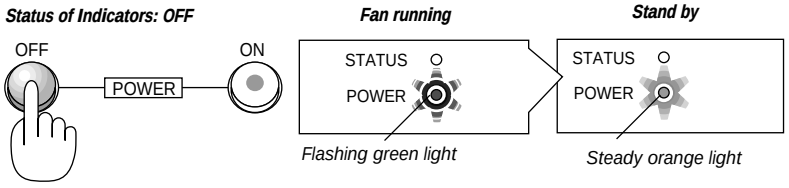
NOTE: *Immediately after turning on the rear projection display, screen flicker may occur. This is not a fault. Wait 3 to 5 minutes until the lamp lighting is stabilized.*



To turn off the rear projection display:
First press the Power (ON/STANDBY) button on the cabinet or the POWER OFF button on the remote control for a minimum of two seconds. The cooling fans keep operating for 2 minutes.

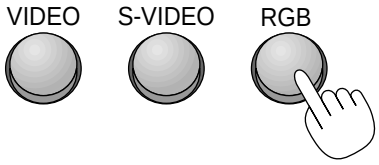
NOTE: *Do not disconnect the power cable or press the main power switch during this time.*

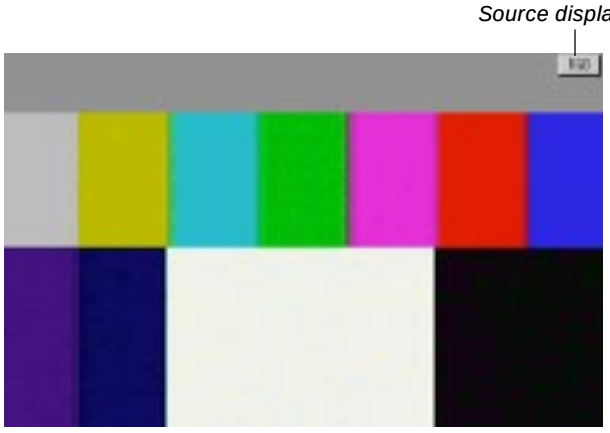
The power indicator will glow orange, and then press the main power switch [O] on the rear terminal panel. The power indicator will go out. Then, unplug the power cable.



Basic Operation

Selecting the computer or video source:

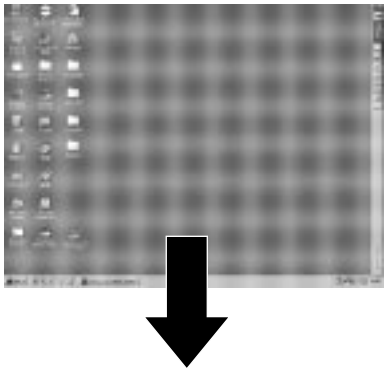




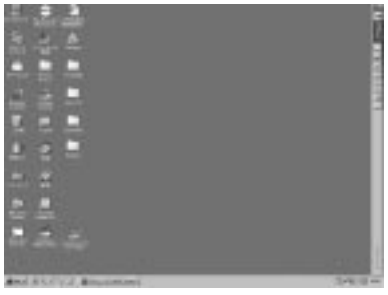
Adjust the Image Using Auto Adjust

The Auto Adjust function automatically optimizes the image in RGB mode.

[Poor picture]



[Normal picture]

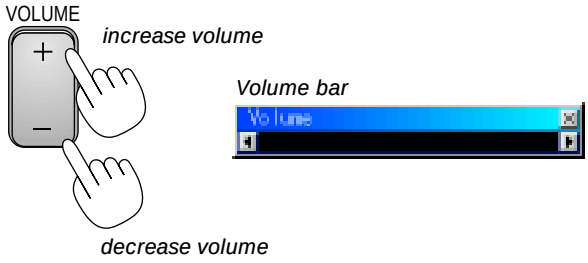


Press the Auto Adjust button to fine-tune the computer image or to remove any vertical banding that might appear and to reduce video noise, dot interference or cross talk (this is evident when part of your image appears to be shimmering). This function adjusts the clock frequencies that eliminate the horizontal banding in the image. This function also adjusts the clock phase to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.)

This adjustment may be necessary when you connect your computer for the first time.

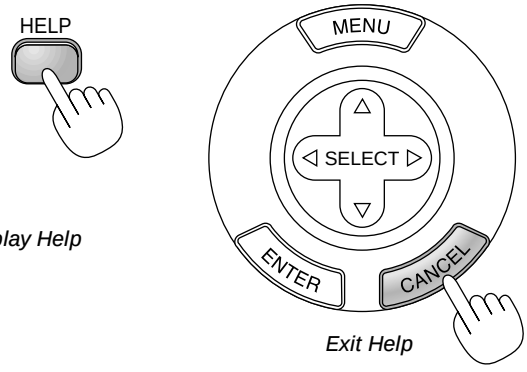
NOTE: *The Auto Adjust function does not work for component signal.*

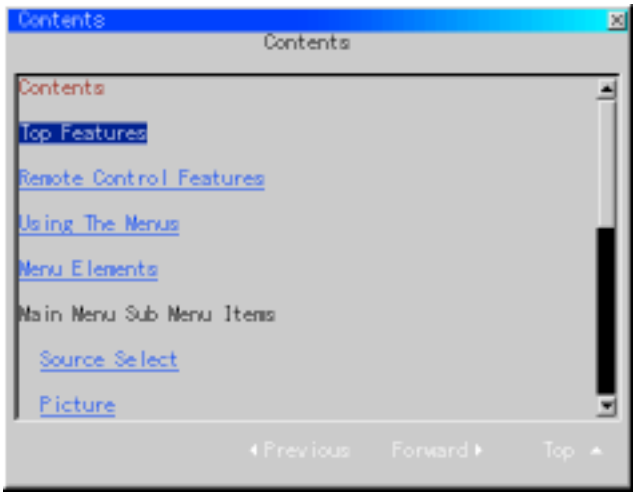
Volume control:
Sound level from the speaker on the rear projection display can be adjusted.



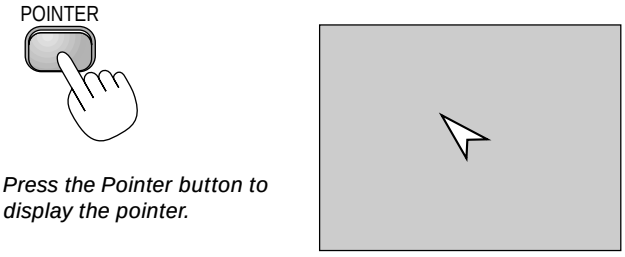
Turning off sound:
Press the Mute button to turn off the sound for a short period of time. Press again to restore the sound.

Getting Help about how to operate the projector:
You get the contents about Help.

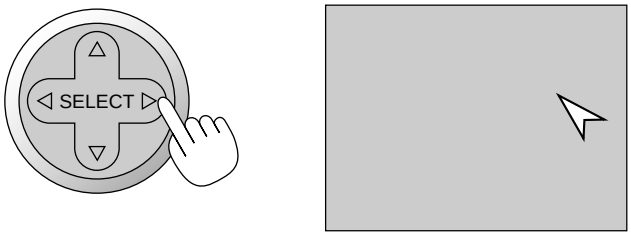




Using Pointer
You can use one of eight pointers to draw your audience's attention to the portion of an image you want.



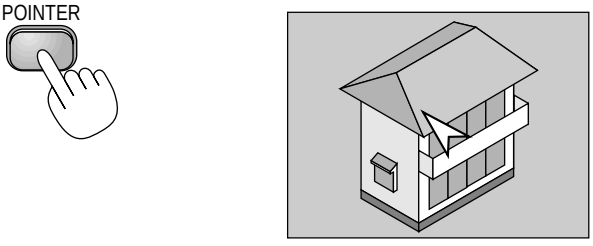
Press the Pointer button to display the pointer.



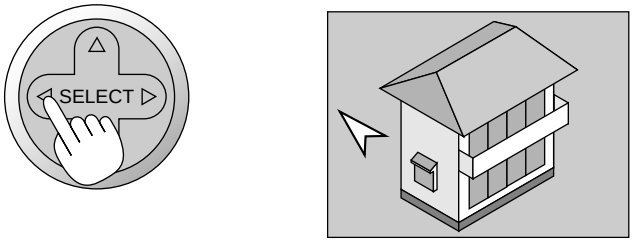
Use the Select button to move the pointer.

Enlarging and Moving a Picture
You can enlarge the area you want up to 400 percent.

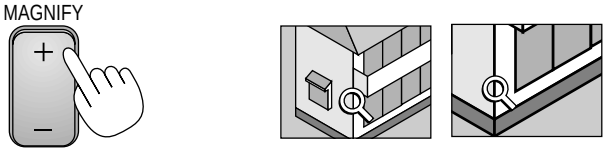
To do so:
1. *Press the Pointer button to display the pointer.*



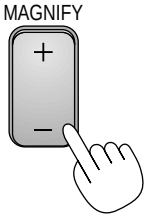
2. *Move the pointer to the area you want to enlarge.*

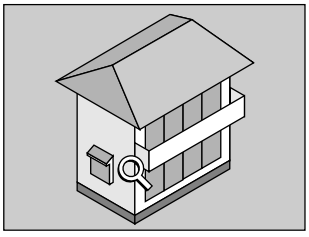


3. *Enlarge the selected area.*
   When the Magnify (+) button is pressed, the pointer is changed to a magnifying glass. To move the magnifying glass, use the Select button.



4. Return the image to the original size.





Using the Menus

NOTE: *An interlaced motion video image may be blurred while the menu is displayed.*

1. Press the “Menu” button on the remote control or the cabinet to display the Main Menu.

2. Press the ▲▼ buttons on the remote control or the cabinet to highlight the menu for the item you want to adjust or set.

3. Press the ► button or the “Enter” button on the remote control or the cabinet to select a submenu or item.

4. Adjust the level or turn the selected item on or off by using “Select” ◄ or ► buttons on the remote control or the cabinet. The on-screen slide bar will show you the amount of increase or decrease.

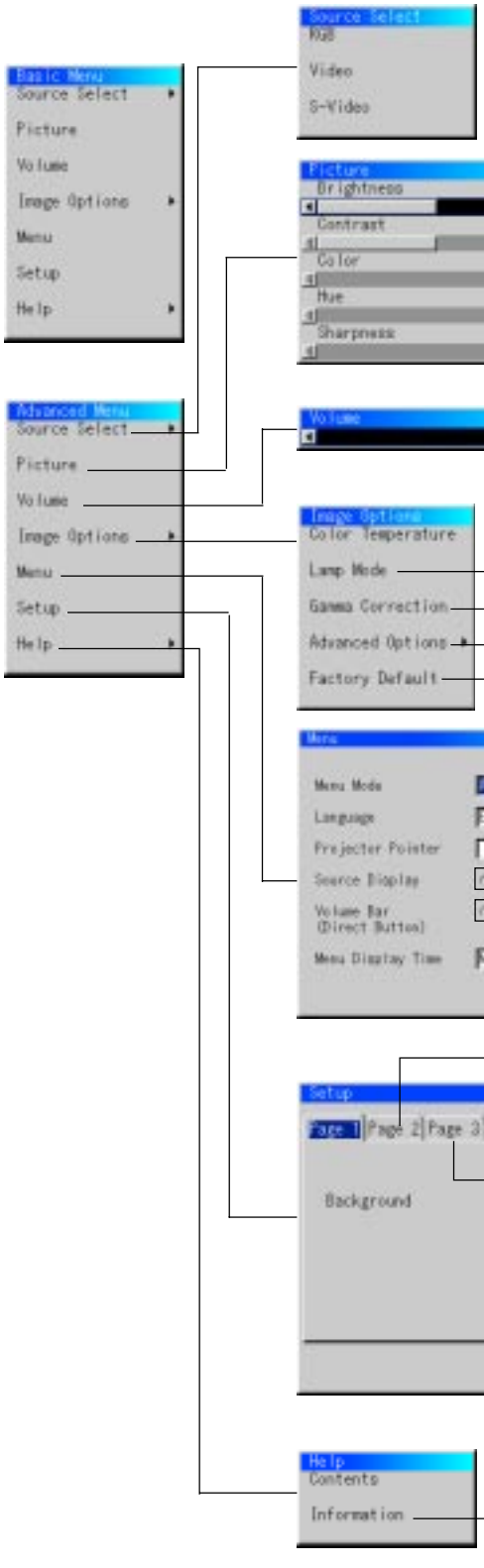
5. The change is stored until you adjust it again.
   ENTER ..... Stores the setting or adjustments.
   CANCEL ..... Return to the previous screen without storing settings or adjustments.

6. Repeat steps 2-5 to adjust an additional item, or press “Cancel” on the remote control or the cabinet to quit the menu display.

Menu Tree

Basic/ Advanced Menu

Sub Menu

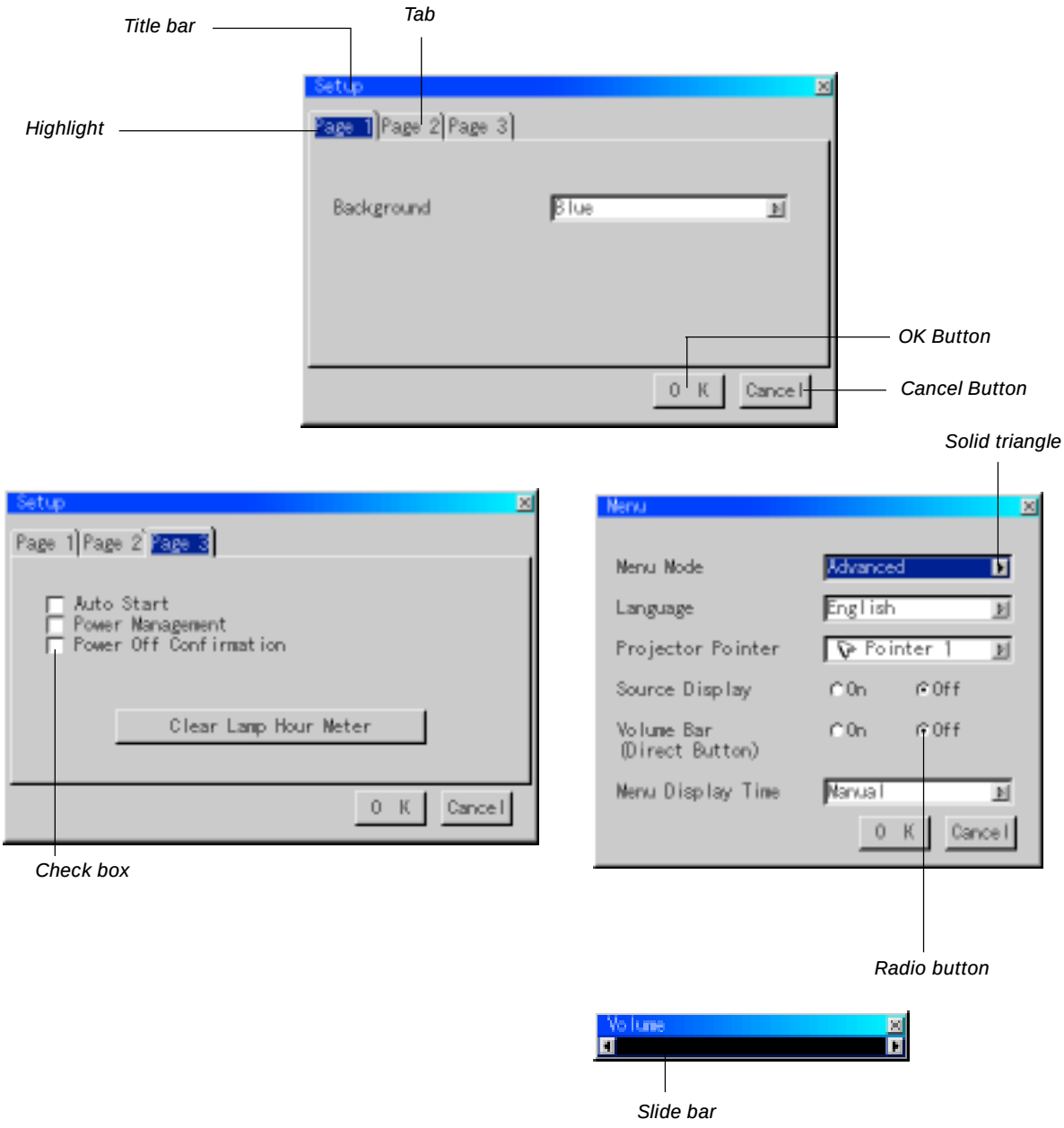


Items

Normal/ Eco	
Normal/ Natural1/ Natural2	
Aspect Ratio	Normal/ Zoom/ Wide Zoom/ Cinema
Noise Reduction	Off/ Low/ Medium/ High
Color Matrix	HDTV/ SDTV/ B-Y/R-Y, Cb/Cr, Pb/Pr
White Balance	Brightness R/G/B, Contrast R/G/B
Auto Adjust	On/ Off
Position/ Clock	Horizontal/ Vertical/ Clock/ Phase
Resolution	Auto/ Native
All Data/ Current Signal	
Menu Mode	Basic/ Advanced
English/ German/ French/ Italian/ Spanish/ Swedish/ Japanese	
Pointer 1–8	
Source Display	On/ Off
Volume Bar (Direct Button)	On/ Off
Menu Display Time	Manual/ Auto 5sec/ Auto 15sec/ Auto 45sec
Signal Select	
RGB	Auto/ RGB/ Component
VIDEO/ S-VIDEO	Auto/ NTSC3.58/ NTSC4.43/ PAL/ PAL60/ SECAM
Auto Start	On/ Off
Power Management	On/ Off
Power Off Confirmation	On/ Off
Clear Lamp Hour Meter	
Background	Blue/ Black/ Logo

Source Name	Resolution
Input Terminal	Aspect Ratio
Horizontal Frequency	Gamma Correction
Vertical Frequency	Noise Reduction
Sync Polarity	Color Matrix
Signal Type	Matrix Type
Video Type	Remaining Lamp Time (%)
Sync Type	Lamp Hour Meter (H)
Interlace	Projector Usage

Menu Elements



Menu windows or dialog boxes typically have the following elements:

Title bar:	Indicates the menu title.
Highlight:	Indicates the selected menu or item.
Solid triangle:	Indicates further choices are available. A highlighted triangle indicates the item is active.
Tab:	Indicates a group of features in a dialog box. Selecting on any tab brings its page to the front.
Radio button:	Use this round button to select an option in a dialog box.
Check box:	Place a checkmark in the square box to turn the option On.
Slide bar:	Indicates settings or the direction of adjustment.
OK button:	Press to confirm your setting. You will return to the previous menu.
Cancel button:	Press to cancel your setting. You will return to the previous menu.

Menu Descriptions & Functions

Source Select

Enables you to select a video source such as a VCR, DVD player, laser disc player, computer or document camera depending on what is connected to your inputs. Press the “Select” button on the cabinet or ▲▼ buttons on your remote control to highlight the menu for the item you want to adjust.

RGB
Selects the computer connected to your RGB or component signal.

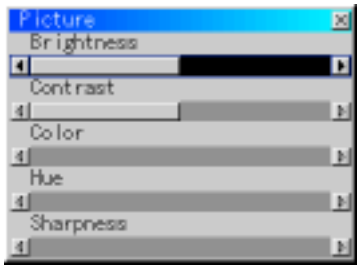
NOTE: *An optional 15-pin-to-RCA× 3 cable (ADP-CV1) is needed for a component signal.*

Video
Selects what is connected to your Video input-VCR, laser disc player, DVD player or document camera.

S-Video
Selects what is connected to your S-Video input-VCR, DVD player, or laser disc player.

NOTE: *A frame may freeze for a brief period of time when a video is played back in fast-forward or fast-rewind with a Video or S-Video source.*

Picture



Provides access to controls for your image. Use the “Select” button on the cabinet or the remote control to highlight the menu for the item you want to adjust.

Brightness
Adjusts the brightness level or the back raster intensity.

Contrast
Adjusts the intensity of the image according to the incoming signal.

Color
Increases or decreases the color saturation level (not valid for RGB).

Hue
Varies the color level from +/- green to +/-blue. The red level is used as reference. This adjustment is only valid for Video and Component inputs (Not RGB).

Sharpness
Controls the detail of the image for Video (Not for RGB and Component).

Volume

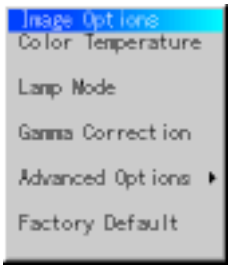
Adjusts the sound level of the rear projection display.

NOTE: *You can display the volume bar without opening the menu.See "Volume Bar (Direct Button)"on page E-34 for more details.*

Image Options

Basic Mode

Advanced Mode



Provides optional controls such as Color Temperature and Lamp Mode. When you select Advanced Mode, the following options are available: Gamma Correction, Aspect Ratio, Noise Reduction, Color Matrix, White Balance, Auto Adjust, Position/Clock, Resolution, and Factory Default.

Color Temperature

This feature adjusts the color temperature using the slide bar.
Move the slide bar to the right to increase the color temperature for a bluish image; to the left to decrease it for a reddish image.

Lamp Mode

This feature enables you to select two brightness mode of the lamp: Normal and Eco modes. The lamp life can be extended up to 3000 hours by using the Eco mode.

Normal ..... Select this mode to increase lamp brightness. This setting consumes maximum current from the AC input and results in the most light output.
Eco ..... Select this mode to extend lamp life. This setting consumes minimum current from the AC input and results in the least light output.

NOTE: *If you have selected the Eco mode, the lamp lights in Normal mode for 3 minutes after the rear projection display is turned on. After 3 minutes the lamp will change to Eco mode.*

Gamma Correction (Advanced mode)

Use the ◄ or ► buttons to choose "Normal" when in a lighted room and "Natural 1&2" when in a darkened room. "Natural 1" for better flesh tone; "Natural 2" for true reproduction of middle tones.
Each mode is recommended for :

Normal ..... Regular picture
Natural 1 ..... For line art such as CAD
Natural 2 ..... For dark portions of a picture

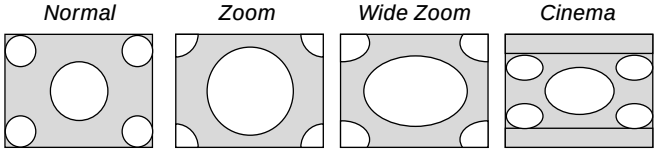
Advanced Options (Advanced mode)

Allows for adjustments of image position and stability.
When you select Advanced Options in Advanced mode, the following options are available: Aspect Ratio, Noise Reduction, Color Matrix, White Balance, Auto Adjust, Position/Clock, Resolution, and Factory Default.

Aspect Ratio

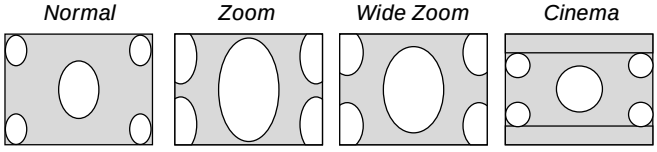
Aspect Ratio allows you to select the best Aspect mode to display your source image. You can also display the Aspect Ratio window by pressing the "Aspect" button on the remote control. (See page E-13).

When 4:3 is selected from the source (i.e. DVD player), the following selections will display:



Standard 4:3 Aspect | All 4 sides stretched | Left & Right stretched | Left and right stretched

When 16:9 is selected from the source (i.e. DVD player), the following selections will display:



16:9 image displayed in 4:3 mode | All 4 sides stretched | Left & right stretched | Left and right stretched to display the true aspect

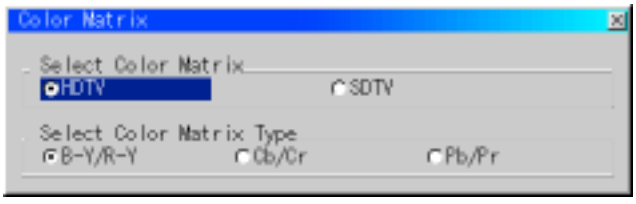
NOTE: *Aspect Ratio is not available for "RGB".*

Noise Reduction

You can select three levels video noise reduction.

NOTE: *The lower the Noise Reduction level, the better the image quality by way of higher video bandwidth.*

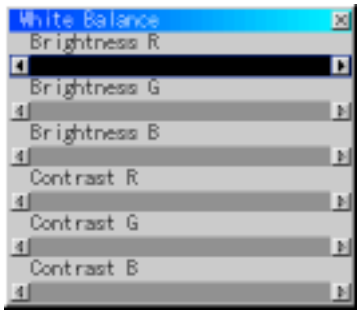
Color Matrix



First select an appropriate color matrix to fit your component signal for HDTV or SDTV. Then select an appropriate matrix type from B-Y/R-Y, Cb/Cr or Pb/Pr.

NOTE: *The Color Matrix feature is available for component video signal only.*

White Balance



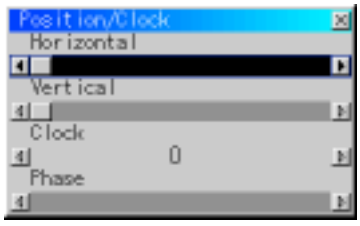
This allows you to adjust the white balance. Brightness for each color (RGB)is used to adjust the black level of the screen;
Contrast for each color (RGB)to adjust the white level of the screen.
First use the up or down buttons to select R, G, or B for the brightness and the contrast. Next use the ◀ or ▶ buttons to adjust the level.

Auto Adjust

When "Auto Adjust" is set to "On", the rear projection display automatically determines the best resolution for the current RGB input signal to project an image using NEC's Advanced AccuBlend Intelligent Pixel Blending Technology.
The image can be automatically adjusted for geometry and stability; "Horizontal Position", "Vertical Position", "Clock" and "Phase".

On ..... Automatically adjusts image "Horizontal Position", "Vertical Position", "Clock" and "Phase".
Off ..... User can adjust the image display functions ("Horizontal Position", "Vertical Position", "Clock" and "Phase") manually.

Position/ Clock (when Auto Adjust is off)



This allows you to manually adjust the image horizontally and vertically, and adjust Clock and Phase.

Horizontal/Vertical
Position ..... Adjusts the image location horizontally and vertically using the ◀ and ▶ buttons.
This adjustment is made automatically when the Auto Adjust is turned on.
Clock ..... Use this item with the "Auto Adjust off" to fine tune the computer image or to remove any vertical banding that might appear. This function adjusts the clock frequencies that eliminate the horizontal banding in the image. Press the ◀ and ▶ buttons until the banding disappears. This adjustment may be necessary when you connect your computer for the first time. This adjustment is made automatically when the Auto Adjust is turned on.
Phase ..... Use this item to adjust the clock phase or to reduce video noise, dot interference or cross talk. (This is evident when part of your image appears to be shimmering.) Use the ◀ and ▶ buttons to adjust the image.
Use "Phase" only after the "Clock" is complete.
This adjustment is made automatically when the Auto Adjust is turned on.

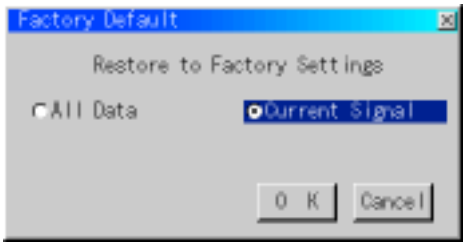
Resolution (when Auto Adjust is off)

This allows you to activate or deactivate the Advanced AccuBlend feature.

Auto ..... Turns on the Advanced AccuBlend feature. The rear projection display automatically reduces or enlarges the current image to fit the full screen.
Native ..... Turns off the Advanced AccuBlend feature. The rear projection display displays the current image in its true resolution.

NOTE: *While you are displaying an image with higher resolution than the rear projection display's native resolution, even when you are in the Native mode, the image is displayed full screen using the Advanced AccuBlend feature.*

Factory Default (Advanced mode)

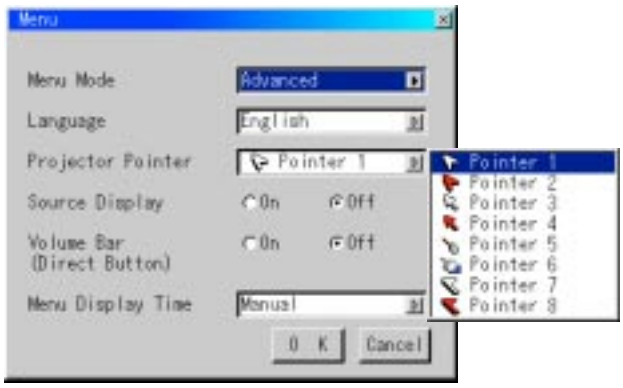


Changes all adjustments and setting to the factory preset for each source individually except Lamp Usage Hours. (To reset the lamp usage time, see "Clear Lamp Hour Meter" on page E-35.)

All Data ..... Reset all the adjustments and settings for all the signals to the factory preset.
Current Signal ..... Resets the adjustments for the current signal to the factory preset levels.

The items that can be reset are: Picture, Color Temperature, Gamma Correction, Aspect Ratio, Noise Reduction, Color Matrix, White Balance, Position/Clock and Resolution.

Menu



Allows you to set preferences for the on-screen menu.

Menu Mode
This feature allows you to select two menu modes: one has basic functionality and the other more advanced functionality.

Basic Mode ..... This is the normal mode.

Advanced Mode ..... This mode is used for advanced users. In this mode you can change the following settings:
Gamma Correction, Aspect Ratio, Noise Reduction, Color Matrix, White Balance, Auto Adjust, Position/ Clock, Resolution, Factory Default, Menu Display Time, Signal Select, Auto Start, Power Management, Power Off Confirmation and Clear Lamp Hour Meter.

Language
You can choose one of seven languages for on-screen instructions. The options are: English, German, French, Italian, Spanish, Swedish and Japanese.

Projector Pointer
This enables you to select from eight different Pointer icons for the “Pointer” button on your remote control.
After moving your Pointer icon to the area you want on the screen, press the Magnify button on the remote control to enlarge the selected area on the screen. See page E-27 for more details.

NOTE: *There may be cases where the Pointer function is not available (ex. a non-interlace signal at 15kHz such as video game.)*

Source Display
You can turn on and off the information for input name such as VIDEO and RGB.
When this option is on, the current input will be displayed each time you switch sources or turn on the rear projection display.

Volume Bar (Direct Button)
This option turns on or off the volume bar when you adjust the sound volume using VOLUME+/-(up and down) button.

On ..... You can increase or decrease the sound volume with the volume bar on screen.

NOTE: *If no adjustments are performed within 3 seconds, the Volume bar will disappear.*

Off ..... You can increase or decrease the sound volume without having to use the volume bar.

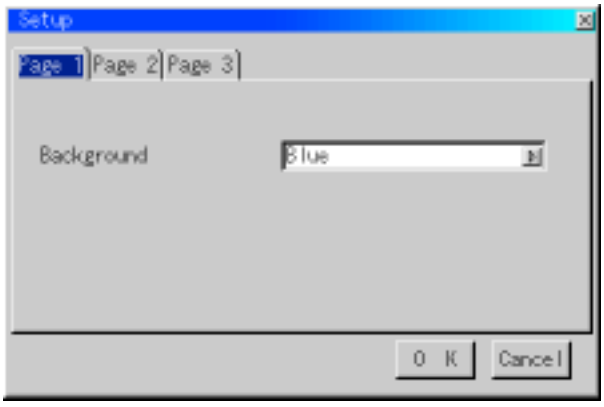
Menu Display Time (Advanced mode)
This option allows you to select how long the rear projection display waits after the last touch of a button to turn off the menu.
The preset choices are "Manual", "Auto 5 sec", "Auto 15 sec", and "Auto 45 sec". The "Auto 45 sec" is the factory preset.

Manual ..... The menu can be turned off manually.
Auto 5 sec .... The menu will automatically be turned off in 5 seconds if no buttons are pressed within 5 seconds.
Auto 15 sec .. The menu will automatically be turned off in 15 seconds if no buttons are pressed within 15 seconds.
Auto 45 sec .. The menu will automatically be turned off in 45 seconds if no buttons are pressed within 45 seconds.

Setup

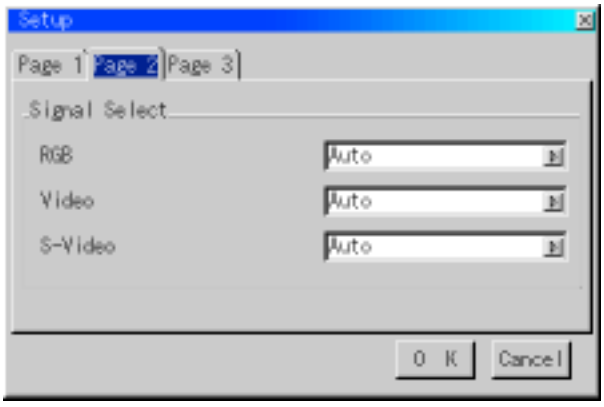
Enables you to set operating options.
Press “OK” to save your changes for all the features of Page1, Page2, and Page3.

[Page1]



Background
Use this feature to display a black/ blue screen or logo when no signal is available.

[Page2] (Advanced mode)

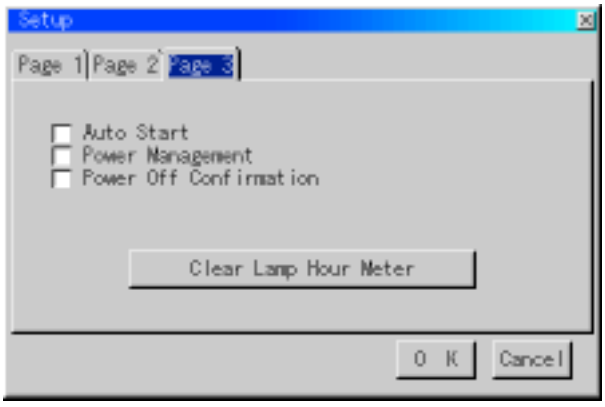


Signal Select

[RGB]
Allows you to choose "RGB" for an RGB source such as a computer, or "Component" for a component video source such as a DVD player. Normally select "Auto" and the rear projection display automatically detects a component signal. However there may be some component signals that the rear projection display is unable to detect. If this is the case, select "Component".

[Video &S-Video System Select]
This feature enables you to select composite video standards manually. Normally select "Auto".
When you select the video standard for Video and S-Video separately, first select the radio button and then select the video standard from the pull-down menu.
This must be done for Video and S-Video respectively.

[Page 3] (Advanced mode)



Auto Start
Turns the rear projection display on automatically when the power cable is inserted into an active power outlet and the main power switch is On. This eliminates the need to always use the “Power” button on the remote control or cabinet.

Power Management
When this option is on and there is no RGB input for five minutes or more, the rear projection display will automatically turn itself off.

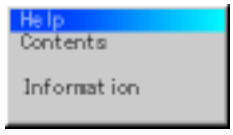
NOTE: *This feature does not work with Video or S-Video sources.*

Power Off Confirmation
This option determines whether a confirmation dialog for turning off the rear projection display will appear or not.

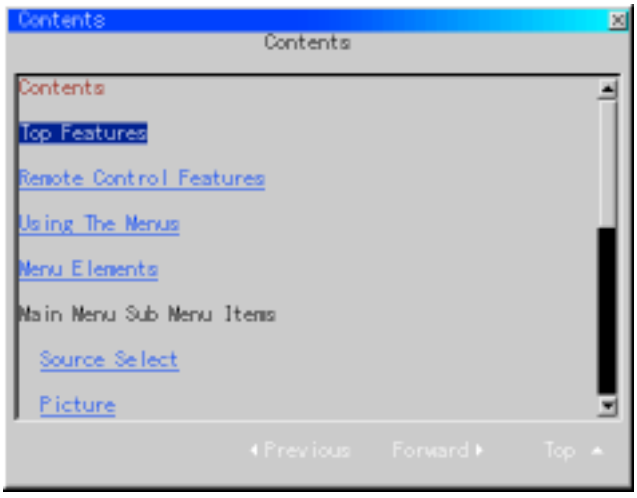
Clear Lamp Hour Meter
Resets the lamp clock back to zero. Pressing this button displays the “Are you sure?” confirmation dialog box. To reset the lamp usage hour meter, press “OK”.

NOTE: *The rear projection display will turn off and go into standby mode after 2100 hours (up to 3150 hours in Eco mode) of service. If this happens, press the “Help” button on the remote control for ten seconds to reset the lamp clock back to zero. Do this only after replacing the lamp.*

Help

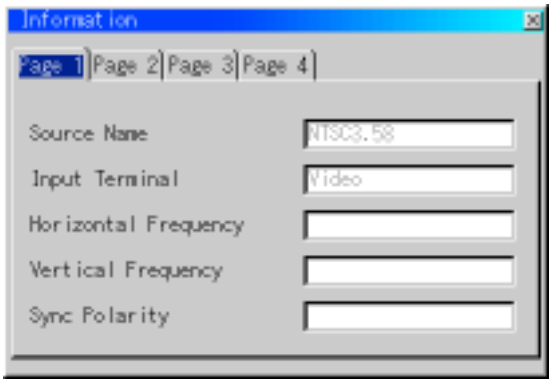


Contents



Provides an online help about how to use the menus. An underlined link means that you can move to an adjustment item directly. Selecting the underlined link and pressing ENTER moves to the corresponding adjustment item.

Information
Displays the status of the current signal and lamp usage. This dialog box has four pages. The information included are as follows:



[Page 2]	[Page 3]	[Page 4]
Signal Type	Aspect Ratio	Remaining Lamp Time (%)
Video Type	Gamma Correction	Lamp Hour Meter (H)
Sync Type	Noise Reduction	Projector Usage
Interlace	Color Matrix	
Resolution	Matrix Type	

NOTE: *The progress indicator shows the percentage of remaining bulb life.The value informs you of the amount of lamp and projector usage respectively.*

4. MAINTENANCE

This section describes the simple maintenance procedures you should follow to replace the lamp and clean the filter.

Replacing the Lamp

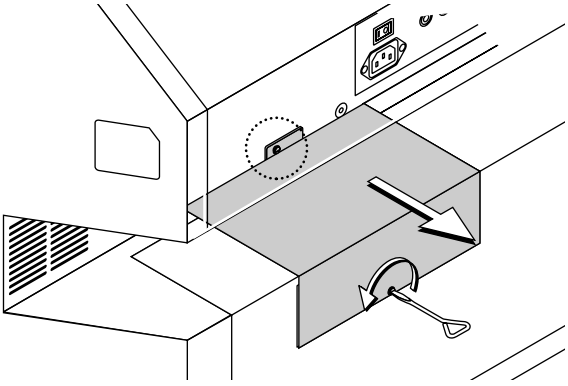
After your lamp has been operating for 2000 hours (up to 3000 hours in Eco mode) or longer, the “Status” light in the cabinet will go on and the message will appear. Even though the lamp may still be working, replace it at 2000 (up to 3000 hours in Eco mode) hours to maintain optimal rear projection display performance.

CAUTION

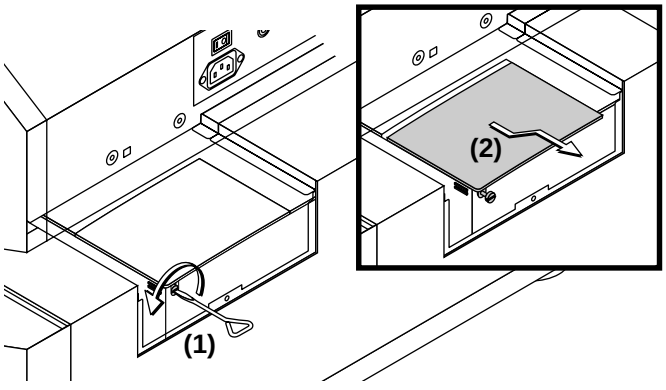
- DO NOT TOUCH THE LAMP immediately after it has been used. It will be extremely hot. Turn the rear projection display off, wait 30 seconds, and then turn off the main power. Allow at least one hour for the lamp to cool before handling.
- DO NOT REMOVE ANY SCREWS except the lamp cover screws and two lamp housing screws. You could receive an electric shock.
- The projector will turn off and go into stand by mode after 2100 (up to 3150 hours in Eco mode) hours of service. If this happens, be sure to replace the lamp. If you continue to use the lamp after 2000 hours (up to 3000 hours in Eco mode) of use, the lamp bulb may shatter, and pieces of glass may be scattered in the lamp case. Do not touch them as the pieces of glass may cause injury.
  If this happens, contact your NEC dealer for lamp replacement.

For this lamp replacement, use the screwdriver included with the optional lamp kit(RT50LP).

1. Remove the lamp cover on the rear cabinet.
Loosen the two lamp cover screws until the screwdriver goes into a freewheeling condition and remove the lamp cover. The lamp cover screws are not removable.

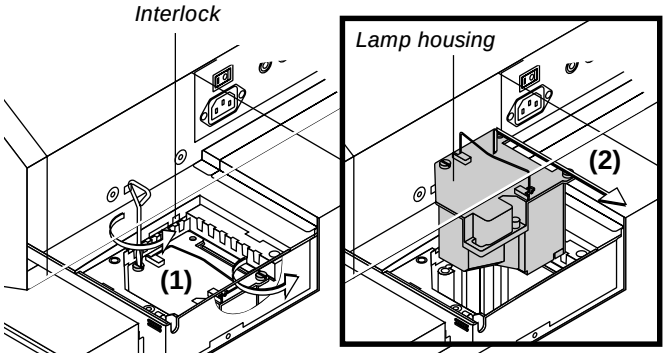


2. Remove the lamp cover on the internal projector.
(1) Loosen the single lamp cover screw until the screwdriver goes into a freewheeling condition and **(2)** remove the lamp cover. The screw is not removable.

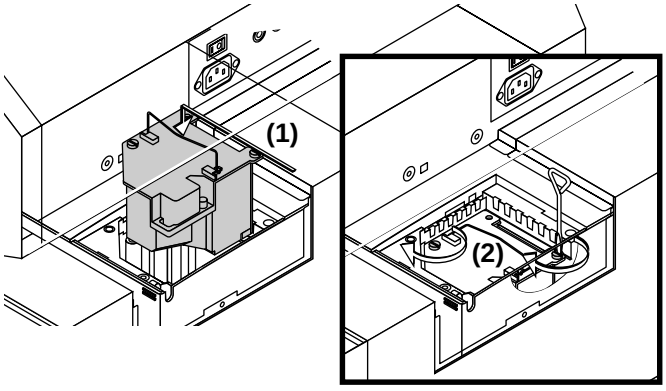


3. Remove the lamp housing.
(1) Loosen the two screws securing the lamp housing until the screwdriver goes into a freewheeling condition. The two screws are not removable.
(2) Remove the lamp housing by pulling out the handle.

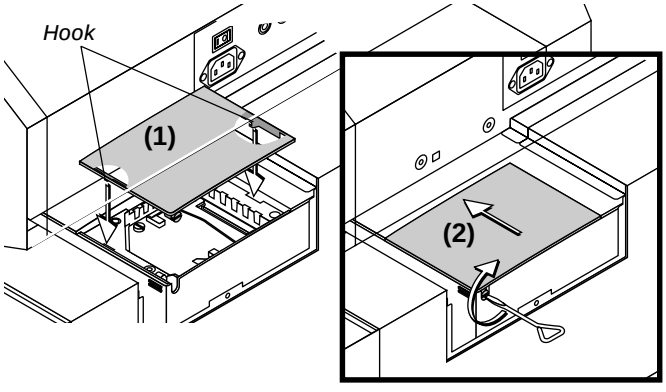
NOTE: *There is an interlock on this case to prevent the risk of electrical shock. Do not attempt to circumvent this interlock.*



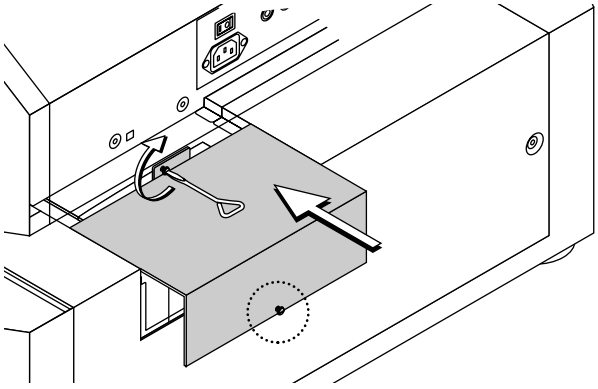
4. Install the new lamp housing.
(1) Insert a new lamp housing until the lamp housing is plugged into the socket.
(2) Secure it in place with the two screws.
CAUTION: Do not use a lamp other than the NEC replacement lamp (RT50LP). Order this from your NEC dealer.
Be sure to tighten the screws.



5. Reattach the lamp cover on the internal projector.
(1) Put the lamp cover to hook the holes.
(2) Slide the lamp cover and tighten the lamp cover screw.
Be sure to tighten the screw.



6. Reattach the lamp cover on the rear cabinet.
Put the lamp cover back on the rear cabinet and tighten the two screws.
Be sure to tighten the screws.



7. Clear the lamp usage hours.
After you install a new lamp, select [Advanced Menu] → [Setup] → [Page 3] → [Clear Lamp Hour Meter] to reset the lamp usage hours.

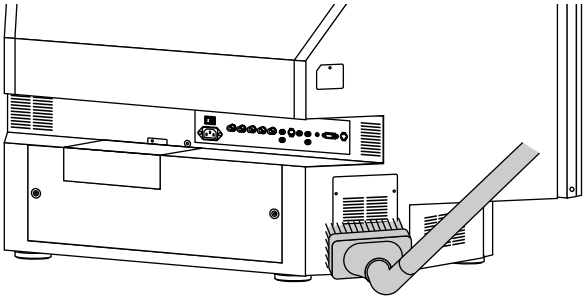
NOTE: *When the lamp exceeds 2100 hours (up to 3150 hours in Eco mode) of service, the rear projection display cannot turn on and the menu is not displayed. If this happens, press the Help button on the remote control for a minimum of 10 seconds while in standby mode. When the lamp time clock is reset to zero, the STATUS indicator goes out.*

Cleaning and Replacing the Filters

Clean the filter covers after every 100 hours of operation (more often in dusty conditions).
If the filters are dirty or clogged, the rear projection display may overheat.
When you replace the lamp, it is also wise to replace the filters.
The filters come in the same package with the NEC replacement lamp (RT50LP).

Cleaning the filters

To clean the filters:
Vacuum the filter through the filter cover.



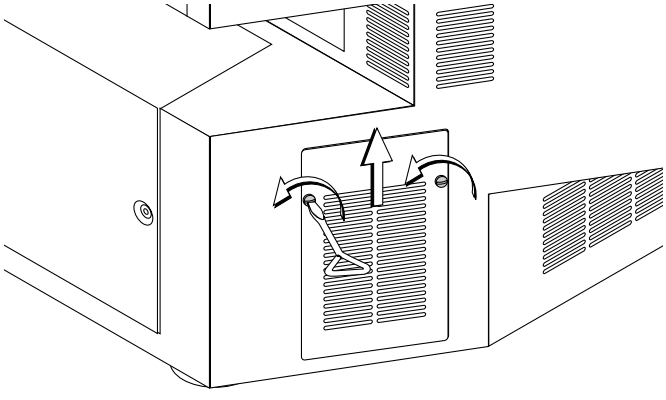
CAUTION
* Turn off the main power before cleaning the filter covers.
* Only clean the outside of the filter cover with a vacuum clearner.
* Do not wash the filter cover and filter(sponge) with soap and water. Soap and water will damage the filter cover and filter membrane.

Replacing the Filters

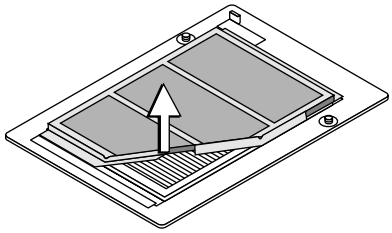
CAUTION
* Turn off the main power before replacing the filters.
* Before replacing the filters, remove dust and dirt from the cabinet. Keep out dust and during filter replacement.
* Do not attempt to operate the rear projection display without the filter covers.
* The rear projection display will not operate unless the filter covers are installed correctly.

There are two filter covers on the rear projection display; one on the left side and the other on the right side.
These two filter covers are different in shape.
The coars-mesh sponge is for the right side filter cover and the fine-mesh sponge for the left side filter cover.
Replacement procedures for both sides are the same.

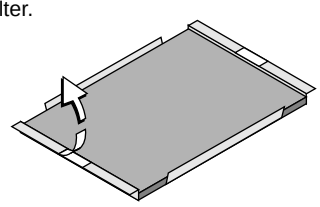
To replace the filter:
1. Loosen the two screws until the screwdriver goes into a freewheeling condition.
Push up and remove the filter cover.



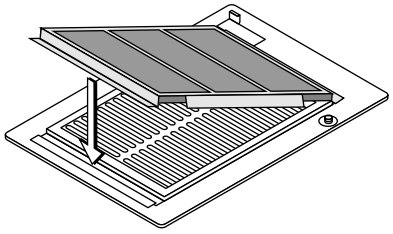
2. Remove the filter and replace it with the new one.
1) Gently remove the old filter from the filter cover.



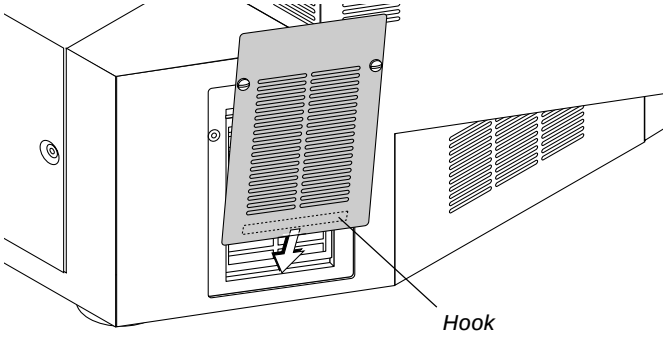
2) Gently peel off a double-faced tape on the new filter. Be careful not to tear off the filter.

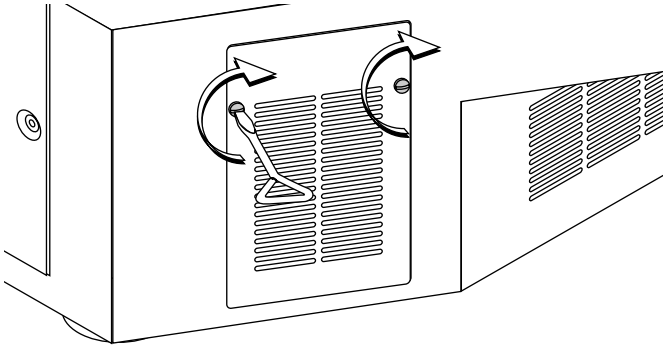


3) Place the new filter on the filter cover with the adhesive side down.



3 Reinstall the filter.
1) Place the filter cover into the cabinet, aligning the hook to engage.
2) Tighten the two screws.





5. TROUBLESHOOTING

This section helps you resolve problems you may encounter while setting up or using the rear projection display.

Power/ Status Light Messages

Condition	Power Indicator	Status Indicator	Note
Standby	Steady orange	–	–
Cooling down	Blinking green	–	Blinks green for 30 seconds
Lamp in Normal mode	Steady green	–	–
Lamp in Eco mode	Steady green	Steady green	–
One minute after lamp is turned on	Blinking green	No light in Normal mode Blinking green in Eco mode	The message "Please wait a moment" appears
Retrying to turn on lamp	Blinking green	Blinking orange	The rear projection display retries 3 times at an interval of 15 sec for max. 45 sec)
3 minutes after lamp is turned on in Eco mode	Steady green	Blinking green	Fixed at Normal mode. Lamp mode can be changed on the menu
Lamp has reached its end of life (3000 hours or over in Eco mode) (2000 hours or over in Normal mode)	Steady green	Steady red (Normal mode)/ Steady orange (Eco mode)	Message appears on screen during this condition. The rear projection display reaches its end of life. Please replace the lamp as soon as possible
Lamp life has reached its end of life (3150 hours or over in Eco mode) (2100 hours or over in Normal mode)	Steady orange	Steady red	The rear projection display is in standby mode and cannot be turned on.
Lamp or filter cover error (3 locations)	Steady orange	Blinking red (1 sec interval)	The rear projection display is in standby mode and cannot be turned on.
Temperature error	Steady orange	Blinking red (4 sec interval)	The rear projection display is in standby mode and cannot be turned on.
Fan error	Steady orange	Blinking red (8 sec interval)	The rear projection display is in standby mode and cannot be turned on.
Lamp error	Steady orange	Blinking red (12 sec interval)	The rear projection display is in standby mode and cannot be turned on.

Common Problems & Solutions

Problem	Check These Items
Does not turn on	• Check that the power cable is plugged in, the main power switch is on, and that the power button on the cabinet or the remote control is on. • Ensure that the lamp cover is installed correctly. See page E-36. • Check to see if the rear projection display has overheated or the lamp usage exceeds 2100 hours (3150 hours in Eco mode). If there is insufficient ventilation around the rear projection display or if the room where you're presenting is particularly warm, move the rear projection display to a cooler location.
No picture	• Use the menu to select your source (Video, S-Video or RGB). See page E-31. • Ensure your cables are connected properly. • Use menus to adjust the brightness and contrast. See page E-31. • Reset the settings or adjustments to factory preset levels using the Factory Default on the Image Options Menu in Advanced mode. See page E-33.
Image is scrolling vertically, horizontally or both	• Use menus or Source button on the remote control or the cabinet to select the source you want to input.
Remote control does not work	• Install new batterys. See page E-14. • Make sure there are no obstacles between you and the rear projection display. • Stand within 22 feet (7 m) of the rear projection display. See page E-14. • Make sure that you are in the rear projection display mode and the PJ button lights in red. If not, press the PJ button. • Make sure the remote control cable plug is not inserted into the REMOTE CONTROL input mini jack on the rear terminal panel.
Status indicator is lit or blinking	• See the Power/ Status Light messages above.
Cross color in RGB mode	• If Auto Adjust is off, turn it on. If Auto Adjust is on, turn it off and balance the image with the Position and Clock Adjust on the Advanced Options Menu. See page E-33.

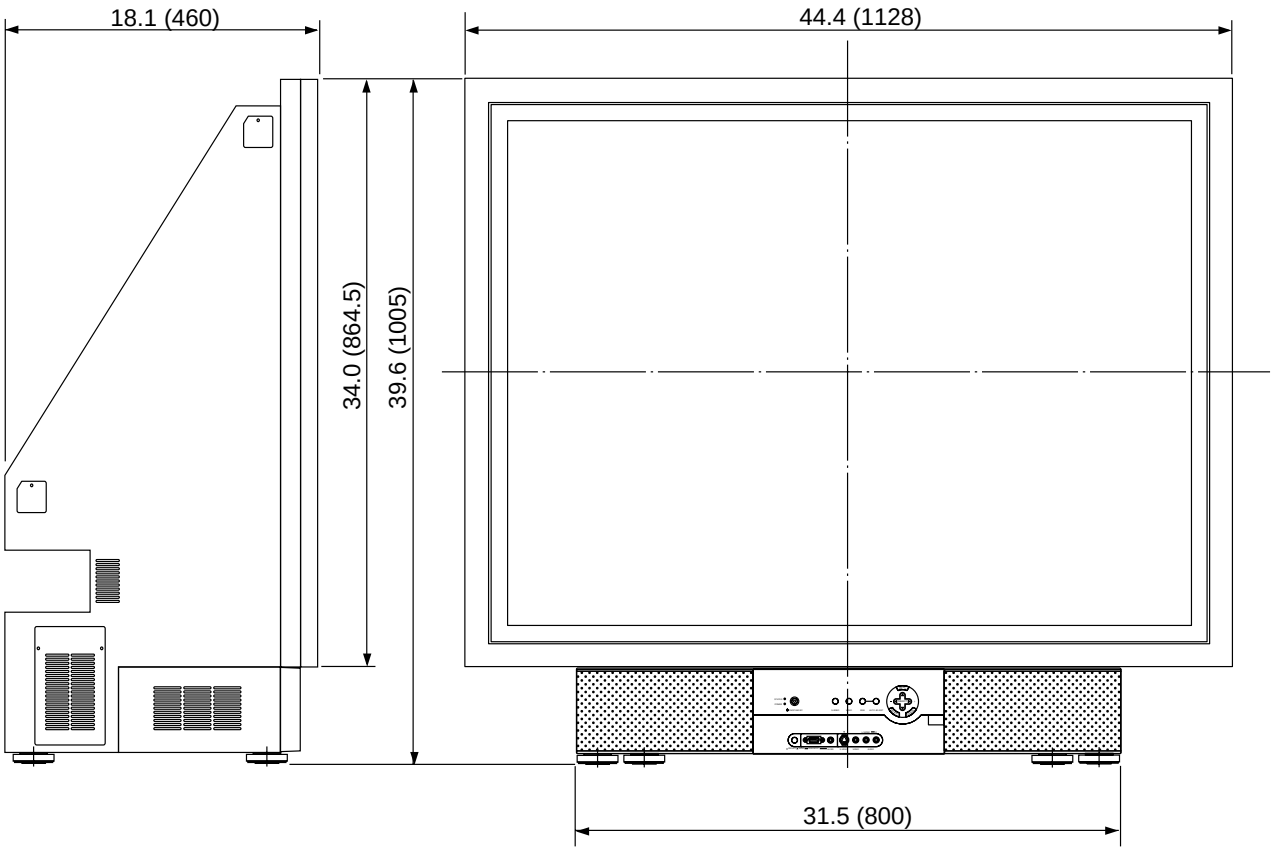
6. SPECIFICATIONS

This section provides technical information about the RT50X rear projection display's performance.

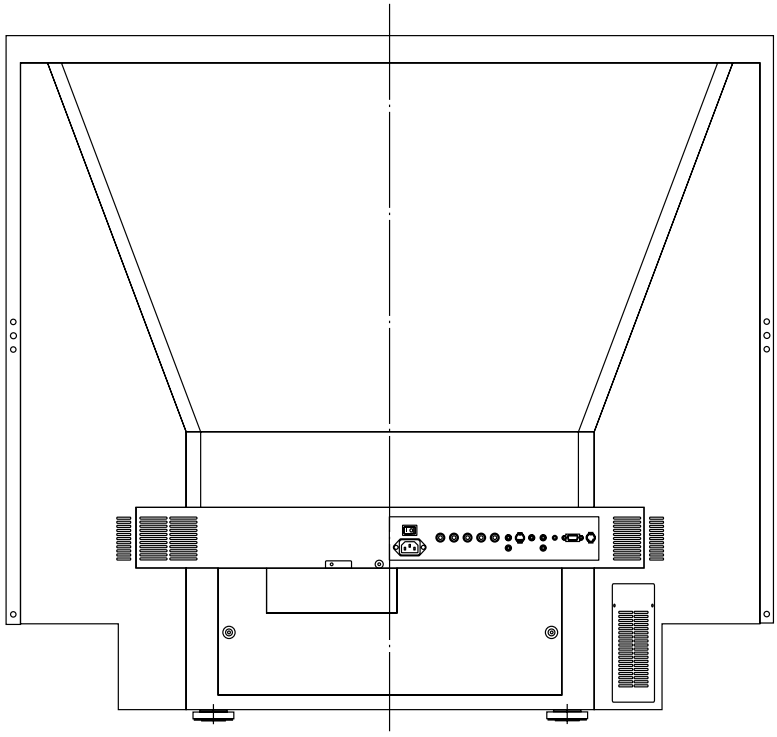
Model Number		RT50X
Projection Type		Rear projection type
Optical		
LCD panel	Size	0.9" (×3 panel)
	Drive system	TFT Active matrix
	Pixels	786,432 pixels (1024 dot × 768 dot)×3
Lens		L-shape lens, F2.4, f=13.68mm
Light source		160W NSH lamp
Optical device		Dichroic mirrors /Cross dichroic prism
Screen size (diagonal)		52"(Screen size), 50" (Viewable size)
Screen		Lentcular screen + Fresnel lens
Aspect ratio		4:3
Optimal viewing area		Horizontal: +/-32 degrees at half brightness, Vertical: +/-10 degrees at half brightness
Color reproduction		Full color, 16.7 million colors
Scan frequency		Horizonal: 15-100 kHz, Vertical: 50-120 Hz
Maximum resolution (high/wide)		1600×1200 (Advanced AccuBlend)
Horizontal resolution		NTSC4.43/NTSC3.58/PAL/YCbCr; 550 TV lines (at S-Video), SECAM; 350 TV lines
Main features		Source select (RGB/S-Video/Video), Auto Adjust, Magnify, Position, Audio Mute, Power On/Off On-screen menu (Brigthness, Contrast, Color, Hue, Sharpness, Volume)
Input		
R,G,B,H,V		RGB: 0.7Vp-p / 75Ω (Positive) Y: 1.0Vp-p / 75Ω (Positive) CbCr: 0.7Vpp / 75Ω H/V Sync: 0.7-4.0Vp-p TTL (Positive/Negative) Composite Sync: 0.7-4.0Vp-p TTL (Positive/Negative) Sync on Green: 0.3Vp-p / 75Ω (Negative)
Composite video		75Ω 1.0Vp-p
S-Video		Y: 75Ω 1.0Vp-p, C: 75Ω 0.283Vp-p
Component		DTV 480i, 480p, 720p, 1080i (60Hz), DVD component video signal
Audio		0.5Vrms/47kΩ or higher
Input/Output terminal		
Front terminal panel		Video input: RGB; Mini D-Sub 15pin (shared with Component input)×1, Video; RCA×1, S-Video connector×1 Audio: Stereo mini jack×1, RCA×2 (L/MONO, R)
Rear terminal panel		Video input: RGB; BNC (shared with Component input)×5, Video; RCA×1, S-Video; DIN 4 pin×1 Remote control: Stereo mini jack×1 PC Control: Mini D-Sub 9 pin×1 Mouse output: Mini DIN 8 pin×1 Audio: RCA×2 (L/MONO, R) for RGB input; RCA (L/MONO, R) for composite video input
Speakers		7W×2 (Stereo) 10cm×round type
Environmental consideration		Operation temperature: 32 to 95˚F (0 to 35˚C) humidity 20 to 80% (non-condensing) Storage temperature: 14 to 122˚F (-10 to 50˚C) humidity 20 to 80% (non-condensing)
Power requirement		100-120/200-240 V AC, 50/60Hz
Input current		3.5 (100-120 V AC) / 1.7A (200-240 V AC)
Dimensions		44.4" (W)×39.6"(H)×18.1"(D) / 1128 (W)×1005 (H)×460 (D) mm (not including protrusions)
Weight		103.6 lbs/47kg
Regulations		UL Approved (UL 1950, CSA 950) Meets DOC Canada Class B requirements Meets FCC Class B requirements Meets AS/NZS3548 Class B Meets EMC Directive (EN55022, EN55082-1, EN61000-3-2, EN61000-3-3) Meets Low Voltage Directive (EN60950, TUV GS Approved) CE

We provide information about our projectors through the world wide web at **http://www.nec-pj.com/**
The specifications are subject to change without notice.
LCD panels are inherently susceptible to bad pixels. The LCD panel may have pixels failures at the rate of 0.01% or less.

Cabinet Dimensions

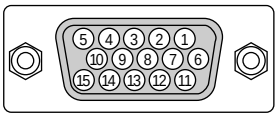


Unit = inch (mm)



D-Sub Pin Assignments

Mini D-Sub 15 Pin Connector



Signal Level
Video signal : 0.7Vp-p (Analog)
Sync signal : TTL level

Pin No.	RGB Signal (Analog)	YCbCr Signal
1	Red	Cr
2	Green or Sync on Green	Y
3	Blue	Cb
4	Ground	
5	Ground	
6	Red Ground	Cr Ground
7	Green Ground	Y Ground
8	Blue Ground	Cb Ground
9	No Connection	
10	Sync Signal Ground	
11	Ground	
12	Bi-directional DATA (SDA)	
13	Horizontal Sync or Composite Sync	
14	Vertical Sync	
15	Data Clock	

Compatible Input Signal List

	Signal	Resolution (Dots)	Frequency H. (kHz)	Refresh Rate (Hz)	Dot Clock (MHz)
	NTSC	–	15.734	60	-
	PAL	–	15.625	50	-
	SECAM	–	15.625	50	-
	VESA	640 × 480	31.47	59.94	25.175
	IBM	640 × 480	31.47	60	25.175
	MAC	640 × 480	31.47	60	25.175
	MAC	640 × 480	34.97	66.67	31.334
	MAC	640 × 480	35	66.67	30.24
	VESA	640 × 480	37.86	72.81	31.5
	VESA	640 × 480	37.5	75	31.5
	IBM	640 × 480	39.375	75	31.49
	VESA	640 × 480	43.269	85.01	36
	IBM	720 × 350	31.469	70.09	28.322
	VESA	720 × 400	37.927	85.04	35.5
	IBM	720 × 350	39.44	87.85	35.5
	IBM	720 × 400	39.375	87.7	35.5
	VESA	800 × 600	35.16	56.25	36
	VESA	800 × 600	37.879	60.32	40
	VESA	800 × 600	48.077	72.19	50
	VESA	800 × 600	46.88	75	49.5
	VESA	800 × 600	53.674	85.06	56.25
	MAC	832 × 624	49.725	74.55	57.283
	VESA	1024 × 768	35.5	43 Interlaced	44.9
	VESA	1024 × 768	48.363	60	65
	VESA	1024 × 768	57.476	70.07	75
	IBM	1024 × 768	58.131	72.03	79
	MAC	1024 × 768	60.241	74.93	80
	VESA	1024 × 768	60.023	75.03	78.75
	VESA	1024 × 768	68.677	85	94.5
#	VESA	1152 × 864	67.5	75	108
#	MAC	1152 × 870	68.681	75.06	100
#	SUN	1152 × 900	61.796	65.95	92.94
#	SGI	1152 × 900	71.736	76.05	105.6
#	VESA	1280 × 960	60	60	108
#	SGI	1280 × 1024	63.9	60	107.35
#	VESA	1280 × 1024	63.981	60.02	108
#	MAC	1280 × 1024	64.31	60.38	107
#	MAC	1280 × 1024	69.9	65.2	118.5
#	HP	1280 × 1024	78.125	72.01	135
#	SUN	1280 × 1024	81.13	76.11	135
#	VESA	1280 × 1024	79.976	75.03	135
#	VESA	1280 × 1024	91.146	85.02	157.5
#	HDTV (1080i)(1125i)	1920 × 1080	33.75	60 Interlace	74.25
#	HDTV (720p)(750p)	1280 × 720	45	60 Progressive	74.25
#	SDTV (480p)(525p)	–	31.47	59.94 Progressive	27
#	SDTV (480i)(525i)	–	15.73	59.9 Interlace	–
#	VESA	1600 × 1200	75.0	60	162
#	VESA	1600 × 1200	81.3	65	175.5
#	VESA	1600 × 1200	87.5	70	189
#	VESA	1600 × 1200	93.75	75	202.5

#: Images in above flagged with # are compressed with Advanced AccuBlend.

NOTE1: *Some composite sync signals may not be displayed correctly.*
NOTE2: *Signals other than those specified in the table above may not be displayed correctly. If this should happen, change the refresh rate or resolution on your PC. Refer to Display Properties help section of your PC for procedures.*
NOTE3: *UXGA can be supported for separate sync signal only.*

PC Control Codes

Function	Code Data
POWER ON	02H 00H 00H 00H 00H 02H
POWER OFF	02H 01H 00H 00H 00H 03H
INPUT SELECT RGB	02H 03H 00H 00H 02H 01H 01H 09H
INPUT SELECT VIDEO	02H 03H 00H 00H 02H 01H 06H 0EH
INPUT SELECT S-VIDEO	02H 03H 00H 00H 02H 01H 0BH 13H
SOUND MUTE ON	02H 12H 00H 00H 00H 14H
SOUND MUTE OFF	02H 13H 00H 00H 00H 15H
ON SCREEN MUTE ON	02H 14H 00H 00H 00H 16H
ON SCREEN MUTE OFF	02H 15H 00H 00H 00H 17H

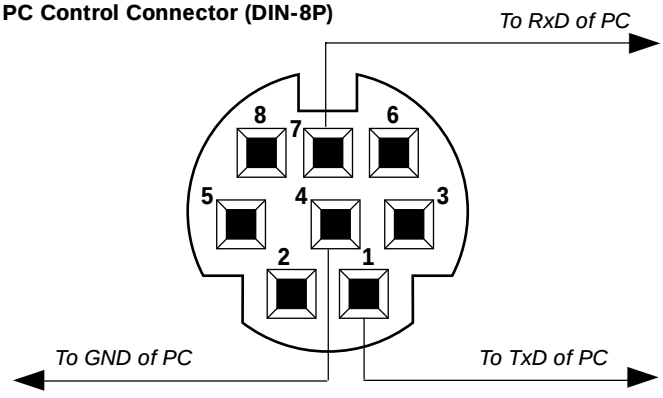
NOTE: *Contact your local dealer for a full list of the PC Control Codes if needed.*

Cable Connection

Communication Protocol

Baud rate:	**38400 bps**
Data length:	**8 bits**
Parity:	**No parity**
Stop bit:	**One bit**
X on/off:	**None**
Communications procedure:	**Full duplex**

PC Control Connector (DIN-8P)



NOTE: *Pins 2, 3, 5, 6 and 8 are used inside the rear projection display.*